Turning back the clock:
Beliefs in gender norms during lockdown[*]

Anne Boring[†] and Gloria Moroni[‡]

May 2021

ABSTRACT

We study the impact of lockdown measures on beliefs regarding gender norms. We collect data from a representative sample of 1,000 individuals in France during the first COVID-19 lockdown in 2020. To measure beliefs in gender norms, we use questions from the European Values Study, and match respondents from the two surveys to compare beliefs before and during lockdown. We find evidence that the first lockdown was associated with a shift towards more traditional beliefs in gender norms. The effect is mainly driven by men and individuals who were the most time constrained during lockdown: individuals with young children living in the household. We also find evidence that is consistent with a "conservative shift" hypothesis: beliefs in traditional gender roles increase more for individuals from economically vulnerable groups. Overall, our results suggest that there is no ratchet effect regarding beliefs in gender norms: when there is a reversal in the conditions that enable individuals to believe in equal gender norms (such as the ability to outsource household production or economic stability), individuals shift their beliefs towards *less* equal gender norms.

Keywords: gender norms, household constraints, economic uncertainty, time allocation, childcare, housework, COVID-19.
JEL Classification Numbers: D13, J16, J22.

[†]Erasmus University Rotterdam, Tinbergen Institute, Sciences Po (LIEPP), boring@ese.eur.nl or anne.boring@sciencespo.fr

[‡]Erasmus University Rotterdam, Tinbergen Institute, moroni@ese.eur.nl

1 Introduction

Until the beginning of the Covid-19 crisis, public policies providing facilities and subsidies for childcare, education, and housework enabled families to outsource part of household production. The ability to outsource household production has been a driving force behind women's increased participation in the labor market (Goldin, 2006).[1] And, as more women have participated in the labor market, more individuals have believed in equal gender norms (Fortin, 2005; Alesina et al., 2013). Throughout Europe, the share of individuals who agree with statements such as "When a mother works for pay, the children suffer" and "A job is alright but what most women really want is a home and children" has decreased since the European Values Study (EVS) first measured beliefs in these statements in 1990 (Figure 1). In countries where individuals believe in more equal gender norms, enrolment rates in early childhood education and care services are higher (Figure 2), and the employment rates of mothers are higher (Figure 3).

Since the beginning of the COVID-19 crisis, many governments have implemented lockdown measures, shutting down businesses, childcare facilities, and schools for extended periods. These restrictions have led to a return of household production constraints and a drop in female labor force participation (Alon et al., 2021). Lockdown measures have hindered families' ability to outsource tasks related to childcare. They have also reduced women's labor force participation: many businesses with high female employment rates (high contact service sectors such as tourism, restaurants, and non-food retail) greatly reduced or stopped their activities (Alon et al., 2020b), and many women took parental leave to take care of children (Alon et al., 2020b,a, 2021). Research conducted in France (Champeaux and Marchetta, 2021; Ducoudré and Périvier, 2020), Italy (Biroli et al., 2020; Del Boca et al., 2020), Spain (Farré et al., 2020), the United Kingdom (Sevilla and Smith, 2020), and the United States (Biroli et al., 2020; Carlson et al., 2020) finds that lockdown measures have significantly increased the time-constraints on households with children (especially younger children), and that women in these households have taken-up the largest share of childcare.

Has the reversal in household production constraints led to a reversal in beliefs in gender norms? To answer this research question, we conducted a survey on a representative sample of 1,000 individuals from the French working population, during the first lockdown period, in early

---

[1]Other factors have played a role in increasing female labor force participation, including new technologies that reduce time spent on housework, and an increase in the supply of jobs available to women (Goldin, 2006).

May 2020. To measure beliefs in gender norms, we asked respondents about their opinion on statements from the EVS.[2] The EVS asks whether respondents (strongly) agree or disagree with statements such as: "A man's job is to earn money; a woman's job is to look after home and family" (EVS, 2020). We interpret a respondent's agreement with a statement such as this one as representing a belief in less equal gender norms—that is, a belief in unequal gender norms.

We estimate the impact of COVID-19 lockdown measures on beliefs in gender norms by using six different statements of the EVS, and by matching individual responses to our survey with the responses of individuals from the latest wave of the EVS for France.[3] We estimate how the respondents to our survey would have likely responded before lockdown, given their observable demographic characteristics, which we match between the two surveys.

To measure how the health crisis impacted individuals' household production constraints, we created a pre-post setting in the survey. We asked questions about respondents' employment status and time use, before and during lockdown. For respondents in a relationship, we included questions about their partners' employment status and time use. These questions enable us to measure the distribution of time spent within couples on household-related tasks. We also collected information on respondents' life satisfaction.

Our main results suggest that lockdown measures are associated with a reversal in gender-role attitudes: beliefs in unequal gender norms increased during the first weeks of the COVID-19 health crisis. Our results are partly driven by respondents who were the most time-constrained during lockdown: individuals from households with children under the age of twelve. The increase in beliefs in less equal gender norms is mainly driven by men. Our evidence suggests a nine to 12 percentage point increase in the share of men who agree with statements that associate women with household production, and men with the role of breadwinner and with business and political leadership, during lockdown. The size of the effect is large: we estimate that, before lockdown, only 5% to 13% of men would have agreed with the statements on which we observe an increase.[4]

The strongest effect is for men in households with at least one child who is twelve years old or

---

[2]Researchers generally use measures from the EVS and the World Values Survey to measure beliefs in gender norms, for instance Alesina et al. (2013).

[3]The EVS collected its latest wave of responses for France less than two years before the beginning of the COVID-19 crisis.

[4]In the unmatched sample from the EVS, the baseline beliefs of men are between 6% and 16% who agree with these statements.

younger. For instance, we find a significant increase in the percentage of men with young children who agree with the following statements during lockdown: a 18.2 percentage point increase for the statement "A man's job is to earn money; a woman's job is to look after the home and family", a 16.5 percentage point increase for "On the whole, men make better political leaders than women", and an 18.2 percentage point increase for "On the whole, men make better business executives than women do".

We also study how lockdown measures impacted men's and women's occupations, and therefore their time constraints and relative availability to take responsibility for household production. During lockdown, some individuals were unable to work (31.8% in our sample), others were working from home (38.2%), and others continued to work outside of the home (30%). In our sample, more women than men stopped working during lockdown: 35.6% of women and 28.2% of men stopped working. Among heterosexual couples[5], only one in five household was in a situation where the male partner was relatively more at home or more available to take responsibility for household production.[6]

In the vast majority of households with children, mothers continued to take responsibility for the largest share of childcare and housework. In 87% of households with children, the mother spent more time on childcare than the father during lockdown. In these households, we find evidence that men shifted beliefs towards less equal gender norms. Men in these households were more likely to agree with all six statements during lockdown. This result may reflect men's beliefs regarding the comparative advantage of mothers and fathers for household production and paid work. We do not find a significant change in the beliefs of mothers in these households: their beliefs do not shift towards agreeing or disagreeing with more traditional gender roles. We find similar results for men and women and the time spend on housework. In households where female partners spent more time on housework during lockdown compared to their male partner, men were more likely to shift their beliefs towards less equal gender norms. Women's beliefs do not change significantly, however.

In the other 13% of households with children—where the father spent more time on childcare

---

[5]Heterosexual couples represent 62.2% of our sample, same-sex couples represent 6.5% of our sample, and single individuals represent 31.3% of our sample.

[6]15% of heterosexual couples were in a situation where the male partner was not working and the female partner was working (either outside of the household or working from home), and 4.8% of heterosexual couples were in a situation where the male partner was working from home and the female partner was working outside the home.

than the mother during lockdown—we find evidence that the female partner tended to agree more often with statements that can be associated with a "mother's guilt" effect (Fortin, 2005), such as "When a mother works for pay, the children suffer" and "All in all, family life suffers when the woman has a fulltime job".[7]

Finally, we estimate whether the increased economic uncertainty (e.g. Altig et al., 2020) and anxiety associated with the COVID-19 crisis impacted beliefs in gender norms. Research shows that the COVID-19 crisis has been associated with a decrease in mental health and an increase in anxiety, including economic anxiety (Adams-Prassl et al., 2020a; Brodeur et al., 2021; Fetzer et al., 2020; Huang and Zhao, 2020). Research further shows that the disease affected more severely populations in areas with higher economic inequality (Ginsburgh et al., 2021). And survey data suggests that the individuals who were the most worried about their personal economic situation during the first lockdown were the ones whose working hours were reduced, who had children living in the household, and from lower income households (Barhoumi et al., 2020).

We use information on respondents' income and education levels to test whether economically vulnerable individuals were more likely to shift their beliefs towards more traditional beliefs in gender roles. Our results suggest that the economic uncertainty created by the health crisis may explain an increase in beliefs in less equal gender norms during lockdown. This result is consistent with the "conservative shift" hypothesis from the literature in social and political psychology: increased exposure to threatening circumstances, often associated with increases in levels of anxiety and economic uncertainty, leads to a "conservative shift"—an increase in support for political conservatism (Jost et al., 2003, 2017; Lee, 2020).

Overall, our results suggest that there is no ratchet effect regarding beliefs in gender norms: individuals can revert to more traditional beliefs regarding gender roles. Beliefs in equal gender norms seem to be conditional on factors such as the ability to outsource household production and the financial stability of the household. When these factors disappear, individuals may revert to beliefs in less equal gender norms. Our results suggest that beliefs in gender norms are a luxury good: individuals may be more likely to believe in equal gender norms when they are not financially constrained or when they have the means to outsource household production, either because they are financially well-off or because they have access to childcare and are less time-constrained.

---

[7]For more literature on the "mother's guilt" effect, see Slaughter (2015) and Kuziemko et al. (2018).

The paper is structured as follows. Section 2 describes the data, including information on how we match respondents of the IPSOS and the EVS datasets. Section 3 provides descriptive evidence on beliefs in gender norms and household production constraints. Section 4 presents the results of our estimates of changes in beliefs in gender norms during lockdown, which can be related to changes in household production constraints. Section 5 studies the "conservative shift" hypothesis. Section 6 presents results of robustness checks. Section 7 concludes.

2   Description of the dataset

In Section 2.1, we describe the two data sources that we use to build the dataset for our empirical analysis on changes in beliefs during lockdown. The first source is from a survey we designed to measure gender differences in the impact of stay at home measures and beliefs in gender norms. IPSOS conducted the survey during the initial lockdown period on a representative sample of 1,000 working individuals in France. The second source is the fifth wave of the EVS, which was conducted in France in 2018. In Section 2.2, we describe how we match respondents of both surveys to build the dataset for our analysis.

2.1   IPSOS and EVS data

All respondents of our survey were at least 18 years old and had a professional activity before lockdown, which in France occurred on March 17th, 2020. IPSOS carried-out the survey between May 4th and May 8th, the week before the end of the first lockdown period (May 11th). The survey agency applied a quota sampling method to ensure that the respondents were representative of the French population, based on gender, age, professional activity, and the region and the type of environment (rural or urban) where the respondent lived at the time of the survey. Since time constraints were an issue during lockdown, we opted for a short, ten-minute, online survey.

Table 1 provides descriptive statistics of the characteristics of the respondents. In the IPSOS sample, 49% of respondents are women. The mean age is 41.7 years old. About one in four respondent is single (26%), 39% of respondents are married, 9% are in a civil partnership, 19% cohabitate with their partner, 5% are divorced, 2% are separated, and 1% are widowed.[8] Among

---

[8]Respondents in a same-sex relationship are 6.5% of the sample (two thirds male couples, one third female couples). We do not have corresponding same-sex couples in the EVS dataset.

respondents, 41% have children living in the household (the average number of children is 1.7 among respondents with children), and 31% of respondents have at least one child who is 12 years old or younger, and who is living in the household during lockdown.

We also collected data on respondents' level of education: 17% did not graduate from high school or earned a vocational degree, 23% graduated from high school, 23% earned a two-year postgraduate degree, and 37% have a higher level of education, which we define as having earned the equivalent of a Bachelor's degree or higher (at least three years after high school). The dataset includes information on household income: 23% of respondents have earnings below 21,000 euros per year, 40% between 21,001 and 36,000 euros, 19% between 36,001 and 48,000 euros, and 19% above 48,000 euros. There are missing observations for the income variables: 91 respondents did not provide this information.

In the IPSOS survey, we included questions from the EVS (EVS, 2020) to measure respondents' beliefs in gender norms. The EVS collected its fifth wave for France between March 3rd and August 16th, 2018. We kept the same format as the EVS questions. We asked whether respondents strongly agree, agree, disagree, or strongly disagree with six statements on gender roles, which we describe in Section 3.1. After collecting the responses for each statement during lockdown, we estimate how our 1,000 respondents likely would have answered before lockdown, by matching respondents from our survey with respondents from the EVS. To have a matching set of respondents, we select the 871 individuals in France from the fifth wave of the EVS who were employed when they were surveyed in 2018. The characteristics of respondents in the EVS sample that we select are similar to the ones of the IPSOS sample.

In the EVS sample that we use (Table 1), 52% of respondents are women, and the mean age is 42.2. About one in four respondent is single (24%), 34% of respondents are married, 9% are in a civil partnership, 14% cohabitate with their partner, 10% are divorced, 7% are separated, and 2% are widowed. The EVS sample includes 48% of respondents who have children living in the household (the average number of children is 1.8 among respondents with children), and 33% of respondents have at least one child who is 12 years old or younger, and who is living in the household.

The educational levels are different between the two surveys: a higher share of EVS respondents (34%) did not graduate from high school or earned a vocational degree, 20% graduated from high

school, 19% earned a two-year postgraduate degree, and 27% earned a higher level of education (at least the equivalent of a Bachelor's degree). The income categories are such that 27% of respondents have earnings below 21,000 euros per year, 32% between 21,001 and 36,000 euros, 24% between 36,001 and 48,000 euros, and 17% above 48,000 euros.[9] In total, 68 respondents did not declare information on household income in the EVS.

Our IPSOS survey included a question from the EVS to measure respondents' life satisfaction. The original question from the EVS is "All things considered, how satisfied are you with your life as a whole these days?". In the IPSOS survey, we asked "All things considered, how satisfied were you with your life as a whole before the beginning of lockdown?". The mean level of satisfaction in the IPSOS sample is 7.24, compared to 7.55 in the EVS sample, on a scale from 1 (dissatisfied) to 10 (satisfied).

Finally, both surveys include information on the region in France where the respondent lives. We include this information as research suggests that beliefs in gender norms may vary by geographic area (Alesina et al., 2013; Le Barbanchon and Sauvagnat, 2019). In the Appendix, we present information on the geographic location of respondents from each survey, in Table A1.

2.2   Nearest-Neighbor Match

We conduct a Nearest-Neighbor Match using respondent characteristics presented in Table 1 to predict the before lockdown beliefs in gender norms of the IPSOS respondents. We build the predicted beliefs in gender norms before lockdown by conducting a Nearest-Neighbor Match with Mahalanobis distances on the following characteristics: age, education categories, marital status, the region the respondent lives in, the number of children living in the household, and the measure of life satisfaction of the respondent. We conduct an exact match on whether the respondent is female and whether the respondent has a child who is 12 years old or younger living in the household.

We use the predicted values from the matching model to construct the outcome variable on beliefs before lockdown for the IPSOS respondents.[10] The precision of our predictions relies crucially

---

[9]The IPSOS and EVS income categories do not match perfectly. We classify EVS household income as belonging to the 0 to 21,000 euros category if respondents declare being in the 0 to 20,979 category, the 21,000 to 36,000 category if they declare 20,980 to 34,919, the 36,000 to 48,000 category if they declare 34,920 to 49,049, and the above 48,000 category if they declare 49,050 euros or more.

[10]The predicted values from the matching model exhibit a bimodal distribution. We set the outcome variable for IPSOS respondents to be equal to one if the predicted value is larger than or equal to 0.5; we set the outcome variable to be equal to zero if the predicted value is below 0.5.

on the quality of the match. In Section 6, we present alternative matches, which suggest that our predicted values are within bounds. In particular, we calculate the average treatment effects (ATE) using different matching characteristics, and also using Euclidean distances. We find that the ATE remain fairly stable in terms of both significance and magnitude across different matching alternatives. We present the results of our predictions in Section 3.

3   Descriptive evidence

In this section, we describe the main outcome variables of our analysis in Section 3.1. In Section 3.2, we describe the variables we use to measure the impact of lockdown on household production constraints.

3.1   Measures of beliefs in gender norms

For each statement measuring beliefs in gender norms, we construct a binary variable equal to one if the respondent answered either "agree" or "strongly agree", and zero if the respondent answered either "disagree" or "strongly disagree". We interpret agreement with any of the six statements as representing beliefs in more traditional gender roles, that is beliefs in unequal gender norms.

Each statement measures a different aspect of beliefs in gender norms. Statements (1) and (2) suggest that a woman's decision to work can have a negative impact on children and family life: "When a mother works for pay, the children suffer" and "All in all, family life suffers when the woman has a fulltime job". Both statements can be associated with a belief in traditional gender roles. When working mothers agree with these statements, these statements can be interpreted as measuring a "mother's guilt" effect (Fortin, 2005). About one out of four men and women agree with these statements during lockdown, with no significant difference between male and female respondents (Table 2, Panel A). Compared to our estimates of beliefs before lockdown (from the Nearest-Neighbor Match described in Section 2.2), we observe an increase in the percentage of both men and women who agree with the first statement (six to 11 percentage point increase). We also observe a small increase for the second statement: three percentage points for men, and four

8

percentage points for women.[11]

Statements (3) and (4) measure the extent to which individuals associate both men and women to traditional gender roles. Statement (3) is "A job is alright but what most women really want is a home and children". This statement measures whether the respondent believes that women in general have a preference for traditional gender roles. This statement is a measure of the respondent's second-order beliefs, as it measures what the respondent believes that other people believe. Research suggests that second-order beliefs in gender norms have an impact on individuals' behaviors regarding gender equality (Bursztyn et al., 2020). Our descriptive statistics suggest that lockdown did not significantly change individuals' second-order beliefs: 28% of women agree with the statement before lockdown compared to 25% during lockdown, whereas 29% of men agree with the statement before lockdown compared to 28% during lockdown.

Statement (4) is "A man's job is to earn money; a woman's job is to look after the home and family". This statement measures individuals' first-order beliefs regarding gender norms, associating men and women to traditional gender roles. We observe an increase in the percentage of men who agree with this statement: from 5% before lockdown to 16% during lockdown. We also observe an increase for women, from 5% to 11%. The difference between men and women during lockdown is statistically significant.

Finally, statements (5) and (6) associate men with activities outside of the home. These two statements suggest that men have an advantage for activities related to economic and political leadership compared to women: "On the whole, men make better political leaders than women do", and "On the whole, men make better business executives than women do". Our descriptive statistics suggest a strong increase in the percentage of men (but not women) who agree with these two statements. Before lockdown, our estimates suggest that 5% of male respondents would have agreed with the former statement, and 7% with the latter statement. During lockdown, 17% of men agree with both statements.

Among these six statements, two have been asked by the EVS over several waves: "When a mother works for pay, the children suffer" (Statement 1) and "A job is alright, but what women

---

[11]The data collection process by EVS is different from our survey. Interviews were conducted in person for the fifth wave of the EVS for France, whereas our survey was administered online. We check that differences in beliefs between our "before lockdown" period (based on EVS responses) and our "during lockdown" period (based on responses to our survey) are not driven by type-of-interview bias in Section 6.2.

really want is a home and children" (Statement 3). Descriptive evidence, which we present in Figure 4, shows that the share of individuals in France who agree or strongly agree with these two statements decreased steadily between 1990 and 2018. In 2020, we observe a clear trend reversal for both statements.

3.2 Measures of household production constraints

To measure whether lockdown measures impacted the division of labor within households, we asked respondents to report the daily hours that they and their partner spent on childcare and housework, before and during lockdown. There are clear measurement errors in the reported time use. For instance, several respondents completed daily time use that exceeds 24 hours. While some respondents do not estimate precisely how much time they spent per day on different tasks, we assume that they are likely to report more accurately the extent to which they believe they spent more or less time than their partner on a given task. The two main variables we use to measure the distribution of tasks within couples are binary variables equal to one if the male partner spent more time than the female partner on i) childcare and ii) household chores.

Panel B of Table 2 shows that there are differences between men and women's perception of their estimated time spent on childcare. Before lockdown, 19% of men declared they spent more time than their partner on childcare, compared to only 9% of women who declared that their male partner did more (the difference is statistically significant). The gap closed during lockdown, with 15% of men declaring they did more, and 11% of women declaring their male partner did more (the difference is not statistically significant). Respondents agreed to a larger extent on whether men spent more time on housework. Men declared contributing more time to housework during lockdown as compared to before lockdown. Whereas 14% of men and 10% of women declared that the male partner was contributing more time than the female partner on housework before lockdown, 20% of men and 18% of women said this was the case during lockdown.

We also asked respondents about their and their partner's employment status and work arrangement before and during lockdown. Panel C of Table 2 shows how lockdown measures impacted the working hours of households. Both men and women worked fewer hours on average during lockdown. On average, during lockdown, female respondents worked 19 hours and 18 minutes per week, and male respondents worked 22 hours and 54 minutes per week (compared to 34 hours and

24 minutes, and 37 hours, respectively, before lockdown). Women were more often not working during lockdown (36% of women, compared to 28% of men). While some women were not working because they could not perform their jobs during lockdown, other women took a leave of absence to take care of their children during this period, mainly for homeschooling purposes.[12] Women were also more often working from home during lockdown (35% compared to 29% of men). Some men (7%) and women (6%) were partly working from home, partly outside. Finally, 36% of male respondents and 23% of female respondents were still working outside the home during lockdown.

The stay at home orders impacted individuals' ability to spend time on household production. Panels B and C of Table 2 are therefore related. Figure 5 shows the change in time spent on childcare and housework by heterosexual couples during lockdown compared to before lockdown, by the nine combinations of employment situations during lockdown (each partner being in one of the following categories: not working, working from home or working outside the home).[13] Men increased the number of hours they spent per day on childcare especially in three situations: when they were not working and their partner was working outside the home (6.8% of couples, see Table A2 in the Appendix), when they were working from home and their partner was working outside the home (4.8% of couples), and when they were not working and their partner was working from home (8.2% of couples).

The two most frequent situations involved both partners not working (19.7% of couples) and both partners working from home (17.9% of couples). In these situations, the relative time spent by each partner on childcare and housework did not change significantly during lockdown. However, the female partner was significantly more likely to increase time spent on childcare relative to her male partner when she was not working during lockdown and her partner was working outside (9.2% of couples) or when she was working from home and her partner was working outside (12.1% of couples).

---

[12]Our data do not enable us to distinguish between these two situations. While official statistics on the share of women and men who took a parental leave during the first lockdown are not available, research suggests that women were more likely to take one than men (Ducoudré and Périvier, 2020).

[13]We included respondents who declared working partly from home, partly outside from home, in the working from home category. The estimates control for the following characteristics: age, number of children, marital status, household income categories, level of education number of hours worked, and region fixed effects. Estimates on childcare include only heterosexual couples who have children. Estimates on housework include all heterosexual couples.

4 Changes in beliefs and household production constraints

In this section, we study whether individuals' beliefs in gender norms are related to the division of labor in household production during lockdown. We measure whether individuals reverted to more traditional beliefs in gender roles when they could not outsource household production and had to adapt to stricter time constraints. We start by studying the impact of lockdown measures on all individuals (Section 4.1). Then, we study constraints in two different ways. First, we study the impact of lockdown measures on the individuals who were the most time constrained during lockdown: parents with young children (Section 4.2). Second, we focus on situations where the father took more responsibility for childcare or housework during lockdown to study the "mother's guilt" effect (Section 4.3).

4.1 Benchmark results

We analyze the changes in beliefs in gender norms during lockdown by estimating the following regression:

$$Y_{it} = \alpha + \beta_1 Lockdown_{it} + \beta_2 Female_i + \beta_3 Female_i \times Lockdown_{it} + \boldsymbol{X}_{it} + \epsilon_{it}, \qquad (1)$$

where the outcome variable Y_{it} is a binary variable equal to one if the respondent answered "Agree" or "Strongly Agree" to a statement presented in Section 3.1. The main variable of interest, *Lockdown*, is a binary variable equal to zero for the period before lockdown and one for during lockdown. In France, the share of individuals who agree with gender unequal norms has steadily decreased since 1990. If the lockdown period is not associated with a shift in gender norms, then we would expect β_1 to be negative, representing the continuation of the trend observed between 1990 and 2018. *Female* is a binary variable equal to one if the respondent is a woman. The coefficient on the interaction term (β_3) enables us to measure whether the impact of the lockdown period is different between male and female respondents. The vector of characteristics $\boldsymbol{X}$ includes both time variant and time invariant characteristics such as age, number of children, marital status, household income categories, level of education, number of hours of worked by the respondent, and fixed effects for the region where the respondent lives. Finally, ϵ_{it} is the idiosyncratic error term. Our benchmark model estimates equation (1) using OLS.

Table 3 presents the benchmark results, where we include the responses of all individuals who answered our survey. We find an effect of lockdown on four out of six measures of beliefs in gender norms. The first lockdown period is associated with a statistically significant increase in the probability of agreeing with the following statements: "When a mother works for pay, the children suffer" (9.5 percentage point increase, Column (1)), "A man's job is to earn money; a woman's job is to look after the home and family" (9.6 percentage point increase, Column (4)), "On the whole, men make better political leaders than women do" (12.3 percentage point increase, Column (5)), and "On the whole, men make better business executives than women do" (10.9 percentage point increase, Column (6)).

The interaction term between *Lockdown* and *Female* is always negative. It shows that the lockdown effect is mostly driven by men, especially for statements (5) and (6). Our results suggest that the lockdown period is associated with an increase in more traditional beliefs in gender roles; that is, an increase in beliefs in *less* equal gender norms, especially among men.

We do not find a significant change in beliefs of the overall population regarding statement (2) ("All in all, family life suffers when the woman has a fulltime job") and statement (3) regarding second-order beliefs ("A job is alright but what most women really want is a home and children").

4.2   The impact of childcare-related time constraints on beliefs

We study whether the increase in time-constraints for households with young children is associated with a change in beliefs in gender norms during lockdown. Research conducted in France, Italy, Spain, the United Kingdom, and the United States (Adams-Prassl et al., 2020b; Biroli et al., 2020; Carlson et al., 2020; Champeaux and Marchetta, 2021; Farré et al., 2020; Sevilla and Smith, 2020) has studied the change in time spent by parents on housework and childcare during the first lockdown. The evidence suggests that parents with young children spent between 30 to 40 hours on additional childcare. Similarly, in our French sample, we find that the number of daily hours doubled for childcare and increased by 50% for housework, during lockdown.

The related research further suggests that mothers took responsibility for most of the additional childcare. We observe similar patterns in our sample: while both men and women declared an increase in the daily time they spent on childcare during lockdown, the gender gap in childcare (that is, the difference between the number of hours that women and men declared spending on

childcare) increased from about 52 minutes per day before lockdown, to one hour and 10 minutes during lockdown.[14] Because having young children significantly increased time constraints on parents during lockdown, we add in equation (1) a binary variable equal to one if there is at least one child who is twelve years old or under living in the household, and we allow the impact of lockdown to differentially impact men and women with and without young children (twelve years old or under) living in the household. We use this variable as a proxy for increased household production constraints.

We find that men with young children increased their beliefs towards *less* equal gender norms during lockdown. In Figure 6 (see also Table A3 in the Appendix), we show the estimated change in beliefs during lockdown for four categories of respondents separately: men and women, and whether or not they were living with young children during lockdown. We find a significant increase in the percentage of men with young children who agreed with all six statements during lockdown. The increases range from an 11 percentage point increase for "All in all, family life suffers when the woman has a fulltime job", to an 18.2 percentage point increase for "A man's job is to earn money; a woman's job is to look after the home and family".

Overall, we find strong empirical evidence of an increase in beliefs in unequal gender norms for men *with* young children. We also find a significant, though smaller, increase for men without young children living in the household, for statements (1), (4), (5) and (6). The percentage who agreed with these statement increases by 5.7 to 10.3 percentage points during lockdown. We also find that men without young children living in the household are less likely to agree with the statement "A job is alright, but what most women really want is a home and children" during lockdown.

Finally, we do not find that women's beliefs changed significantly during lockdown, whether they had young children living in the household or not. There are two exceptions. Women with young children are more likely to agree with the statement "A man's job is to earn money; a woman's job is to look after the home and family" during lockdown. We also find a small increase in the percentage of women without young children who agree with the statement "On the whole, men make better business executives than women do".

---

[14]For each observation, we construct two variables—one for childcare and one for housework—measuring the time gap between the daily hours spent on childcare and housework between female and male partners. A positive gender gap means that the female partner is spending more time on the task than the male partner. The childcare gap takes into account all heterosexual couples with children, regardless of the number of children and their age. The housework gap takes into account all heterosexual couples, whether they have children living in the household or not.

4.3 Mother's guilt effect

Figure 6 suggests the existence of a weakly significant increase in the percentage of women with young children who agree with statement (1): "When a mother works for pay, the children suffer". We explore whether this increase can be associated with a "mother's guilt" effect (Fortin, 2005), by looking more closely at the characteristics of the women whose beliefs shifted during lockdown. We study whether women whose male partner took extra responsibility for childcare during lockdown were more likely to shift their beliefs in gender norms. As we explain in Section 3.2 and Figure 5, men were more likely to increase their share of time spent on childcare when they were relatively more at home and available than their female partner.

Using the benchmark model in equation (1), we include a binary variable equal to one if the male partner spent (strictly) more time than the female partner on childcare during lockdown, and include an interaction term between the gender variable and this binary variable. We allow the impact of lockdown to be different between men and women, as well as between this binary variable. Figure 7 shows that women whose male partner took responsibility for more than 50% of childcare were more likely to agree with statements associated with a "mother's guilt" effect during lockdown.[15] The percentage of these women who agreed with the statement "When a mother works for pay, the children suffer" increased by 48.6 percentage points during lockdown.[16] The percentage of these women who agree with the statement "All in all, family life suffers when the woman has a fulltime job" increased by 38.8 percentage points during lockdown. They were also more likely to agree with the statement "A man's job is to earn money; a woman's job is to look after the home and family". The statistical significance—but not the direction—of these estimates is sensitive to the specification of the matching predictions, as we explain in Section 6. This is partly due to the fact that the statistical power is low, as there are only a small number of households where the male partner took more responsibility for childcare during lockdown.

Overall, we find no evidence that men taking more responsibility for childcare lead men to believe more in equal gender norms. And, if anything, men taking more responsibility for childcare during lockdown lead women to experience a "mother's guilt" effect.

---

[15]The complete table of results is Panel A of Table A4 in the Appendix.

[16]The effects that we estimate for this particular group of women are larger than the effects we estimate for men, but they are also less precisely estimated as can be seen from the confidence intervals on Figure 7.

Figure 7 also suggests that men were more likely to agree with all six statements when the female partner took responsibility for at least 50% of childcare during lockdown. Our measured effect could be the result of a selection of women taking parental leave more often in more traditional couples or in couples where men have a comparative advantage for paid labor and women for household production. This result may also be consistent with situations where women stopped working more often in couples where the male partner holds stronger beliefs in traditional gender norms or has stronger bargaining power.[17]

We conduct the same analysis for the time spent by partners on housework (taking all heterosexual couples into account, whether they have children or not). Figure 8 (Panel B of Table A4 in the Appendix) presents our main results. We find that women did not significantly change their beliefs in gender norms. However, men were more likely to agree with unequal gender norms when their female partner was the one doing the largest share of housework during lockdown.

5 The Conservative shift hypothesis

Research from the social and political psychology literature has documented that increased exposure to threatening circumstances, often associated with increases in levels of anxiety and economic uncertainty, leads to a "conservative shift"—that is, an increase in support for political conservatism (e.g. Jost et al. 2003, 2017; Lee 2020). Research conducted during the first lockdown period has found that stay at home measures were more likely to affect individuals from specific groups, including more economically vulnerable individuals and less educated workers (e.g. Adams-Prassl et al. 2020b; Barhoumi et al. 2020; Lambert et al. 2020).

In our context, the conservative shift hypothesis would entail that individuals facing higher uncertainty during the COVID-19 crisis are more likely to shift their beliefs towards more traditional gender norms. We estimate whether individuals from lower income households or with lower levels of education are more likely to shift their beliefs towards more traditional gender roles during lockdown. We therefore estimate whether lockdown measures differentially impacted individuals in situations of higher uncertainty, either because they have lower income or lower levels of education.

---

[17]We cannot distinguish between cases where the partners could choose who would take time off work to increase their responsibility for childcare, versus cases where the female partner was unable to work and therefore took responsibility for childcare. In our sample, we do not know whether an individual is not working because of the lockdown measures or by choice.

Figure 9 presents our main results for the analysis on income, and Figure 10 for the analysis on education.[18] Our findings are consistent across the two figures: men in low income households (less than 48,000 euros per year[19]) and men with a low level of education (less than the equivalent of a Bachelor's degree) were more likely to change their beliefs towards less equal gender norms during lockdown. We find shifts in beliefs for four out of six statements. The two exceptions are "All in all, family life suffers when the woman has a fulltime job" and second-order beliefs regarding gender norms, that is "A job is alright but what most women really want is a home and children".

These results suggest that the COVID-19 crisis may increase cultural differences between high income (educated) and low income (educated) individuals. For instance, 5.9% of low income respondents agreed with the statement "A man's job is to earn money; a woman's job is to look after the home and family" before lockdown, compared to 4.1% of high income respondents. After lockdown, 15.4% of low income respondents agreed with the statement, compared to 8.9% of high income respondents. Our findings are consistent with the "conservative shift hypothesis": when individual are threatened by economic uncertainty, this may lead to a shift towards more traditional beliefs.

Figures 9 and 10 also suggest that women of higher education households were *less* likely to agree with the statement "On the whole, men make better political leaders than women do" during lockdown. This result may reflect a popular narrative in the press in April 2020 following a Forbes article (Wittenberg, 2020) suggesting that countries with female leaders were more successful in dealing with the COVID-19 crisis. More highly educated women were also less likely to agree with the statement "A job is alright but what most women really want is a home and children".

6 Robustness

6.1 Estimation and matching alternatives

Our estimations rely on the predictions from the Nearest Neighbor Match we conduct. In this section, we present the results of several analyses we conduct to test the robustness of our estimates to different empirical strategies and alternatives to our baseline matching exercise.

---

[18]The complete table of results is in the Appendix, see Panel A (income) and Panel B (education) of Table A5.
[19]We use this threshold, as the higher income category is the least financially constrained.

First, instead of matching respondents from the EVS survey and our IPSOS survey, we estimate our benchmark model using an OLS cross section analysis. Respondents from both surveys are representative of the French population, and descriptive statistics comparing respondents from both surveys (Table 1) suggests that both samples are quite comparable (the main differences between the two datasets concern the education variable). Using this unmatched dataset, we find very similar results as when using the matched dataset. Results in Table A6 in the Appendix suggest that lockdown is associated with a statistically significant increase in beliefs in unequal gender norms across the same four out of six statements. Statement (2) is weakly significant in the unmatched data. The results also confirm that the main effects are driven by men.

Second, we estimate our benchmark model by running our baseline model directly on the matched data. Compared to the main analysis (Table 4.1), we use the control variables from the Nearest Neighbor Match in this exercise. Table A7 in the Appendix presents the results, which are similar in size and significance compared to the ones we present in Table 3.

Finally, Table ?? in the Appendix compares average treatment effects estimated using different respondent characteristics to conduct the match, and using either Mahalanobis distances (columns (1) to (6)) or Euclidean distances (columns (7) to (12)). The ATE for our baseline model is Model 1 with Mahalanobis distances. We find that our ATE are comparable to the other models and to Euclidean distances.

6.2 Social-desirability bias

We check whether social-desirability or type-of-interview bias can explain our results. Indeed, respondents to our survey may have been more willing to express beliefs in unequal gender norms because our survey was conducted online, compared to the EVS survey which was conducted in person. We measure desirability bias by using data from the fifth wave of the EVS for six countries (Denmark, Finland, Germany, Iceland, Netherlands and Switzerland), where some respondents were interviewed in person and other respondents were surveyed online. In these countries, we compare respondents who answered each statement in the online version of the survey with the in-person interview version of the survey. In Panel A of Table A9 in the Appendix, we show results of regressions where the coefficient on the variable *Online survey* measures the difference in the share of individuals who agree with each statement in the online version of the survey compared

to the in-person interviews. We find that men are more likely to agree with most statements in the online version (the main exception is statement (1)). Depending on the statement, respondents are between 9% and 18% more likely to agree with a statement when the question is asked online compared to an in-person interview. While this result suggests that social-desirability bias may explain part of our results, it is likely to explain only a small share of the effect that we find for two reasons. First, the economic significance of the coefficients is small compared to the changes that we measure through our lockdown survey. For instance, looking at our benchmark results reported in Table 3 for statement (4), we find that respondents are 52% more likely to agree with the statement during lockdown, compared to before the lockdown. Second, in our analysis, we make the conservative assumption that respondents would not have changed their beliefs between 2018 and before the lockdown. But had the decreasing trend of agreement on these statements continued, we would have expected a *decrease* in the share of respondents who agree with these statements in 2020 compared to 2018.

Table A9 in the Appendix shows that type-of-interview reporting bias does not depend on having children under 12 in households. This result further suggests that the effects we find during lockdown are not mainly or completely driven by social-desirability bias.

7   Conclusion

In this research, we study whether beliefs in gender norms are entrenched or whether a negative shock on household production constraints can lead individuals to shift their beliefs towards more unequal gender norms. We find evidence that the COVID-19 crisis led some individuals to believe in more unequal gender norms. Our research highlights two mechanisms. First, when individuals become time-constrained (i.e. higher household production constraints), they are more likely to believe in less equal gender norms. Second, individuals in situations of higher economic uncertainty are more likely to increase their beliefs in unequal gender norms. The main effects that we find are driven by men, who are more likely to shift their beliefs towards less equal gender norms. We also find evidence of a shift for women, which is consistent with a "mother's guilt" effect: when the male partner takes responsibility for a larger share of childcare, women tend to agree more often with the two statements relating a mother's paid employment with a cost for the family. This

effect may explain results found in other countries, which suggest that even when women worked during lockdown, they nonetheless increased the time they spent on childcare (Biroli et al., 2020; Champeaux and Marchetta, 2021; Del Boca et al., 2020; Farré et al., 2020; Sevilla and Smith, 2020). The results that we find for France are likely to be found in other countries, especially countries that adopted strict lockdown measures, and where households struggled more to outsource household production.

Our findings suggest that the trend towards stronger beliefs in equal gender norms, which has been observed in many European countries since the early 1990s, relies at least partly on the ability of households to outsource household production and to sustain financial stability. These results have important policy implications. When governments implement strong stay at home orders, they may reinforce beliefs towards less equal gender norms. Furthermore, increasing support for gender equality may rely on reducing economic uncertainty and inequalities. Our finding of stronger effects in economically vulnerable groups might also imply a widening of differences in beliefs in gender norms across socioeconomic statuses. This widening gap in beliefs (between low income and high income households) may be further exacerbated if high income households become more likely to believe in equal gender norms in the long run, as suggested in research by Alon et al. (2020b,a). Indeed, higher income individuals may be more likely to benefit from flexible work arrangements and having both partners working from home, which could lead to an increase in beliefs in equal gender norms in these households.

The effects that we measure may be only short run effects: when lockdown measures disappear, household production constraints will also disappear, and individuals may revert to beliefs in more equal gender norms. However, the length of the COVID-19 crisis could lead to long run impacts on individuals' beliefs, women's participation in the labor market, and their decision to prioritize childcare over careers. The literature has highlighted that long-lasting shocks in gender roles can have long run consequences for gender identity norms; differences in comparative advantage lead to persistent beliefs about gender roles, which have explained cross-country differences in labor force participation of women (Alesina et al., 2013). For example, during World War II, women entered the labor market due to men's military involvement in the war; this change in gender roles persisted across generations and led to an increase in female labor force participation in the long run (Fernández et al., 2004). We observe an opposite effect on women's labor force participation

20

caused by lockdown measures: women left the labor market to take care of household production, especially childcare. The effects that we find may have long run repercussions, if some groups remain economically vulnerable, even when lockdown measures are relaxed and households become able to outsource household production again.

Overall, our results suggest that the COVID-19 crisis could lead to short run and long run reversals in trends towards women's labor market outcomes, such as the labor force participation of women. The COVID-19 crisis may impact women's labor market opportunities, especially if they lost more labor market skills than men (Alon et al., 2020b). If women are left too long out of work to care for the household, and if the observed shifts towards more unequal gender norms persist, then the COVID-19 crisis may stall or even reverse the trend towards a reduction of gender gaps on the labor market observed since the 1960s (Blau and Kahn, 2017). The COVID-19 crisis could have long run implications for women in other markets too, such as the electoral market. For instance, Le Barbanchon and Sauvagnat (2019) show that beliefs in unequal gender norms are associated with voter discrimination against female candidates in the electoral market. Using statements similar to ours, they find that voters who believe in less equal gender roles prefer voting for male candidates.

Whether the changes that we document will persist likely depends on the length of the health and economic crisis and its associated feelings of anxiety and economic uncertainty.

References

Adams-Prassl, A., Boneva, T., Golin, M., and Rauh, C. (2020a). The impact of the coronavirus lockdown on mental health: evidence from the US. *HCEO Working Paper Series*, (2020-030).

Adams-Prassl, A., Boneva, T., Golin, M., and Rauh, C. (2020b). Inequality in the impact of the coronavirus shock: Evidence from real time surveys. *Journal of Public Economics*, 189:104245.

Alesina, A., Giuliano, P., and Nunn, N. (2013). On the origins of gender roles: Women and the plough. *The Quarterly Journal of Economics*, 128(2):469–530.

Alon, T., Coskun, S., Doepke, M., Koll, D., and Tertilt, M. (2021). From Mancession to Shecession: Women's employment in regular and pandemic recessions. *National Bureau of Economic Research.*, (w28632).

Alon, T., Doepke, M., Olmstead-Rumsey, J., and Tertilt, M. (2020a). The impact of COVID-19 on gender equality. *NBER Working Paper*, (w26947).

Alon, T., Doepke, M., Olmstead-Rumsey, J., and Tertilt, M. (2020b). This time it's different: The role of women's employment in a pandemic recession. *NBER Working Paper*, (w27660).

Altig, D., Baker, S., Barrero, J. M., Bloom, N., Bunn, P., Chen, S., Davis, S. J., Leather, J., Meyer, B., Mihaylov, E., et al. (2020). Economic uncertainty before and during the covid-19 pandemic. *Journal of Public Economics*, 191:104274.

Barhoumi, M., Jonchery, A., Lombardo, P., Le Minez, S., Mainaud, T., Raynaud, E., Pailhé, A., Solaz, A., and Pollak, C. (2020). Les inégalités sociales à l'épreuve de la crise sanitaire: un bilan du premier confinement. *Working Paper*, (hal-03045998).

Biroli, P., Bosworth, S., Della Giusta, M., Di Girolamo, A., Jaworska, S., and Vollen, J. (2020). Family life in lockdown. *HCEO Working Paper*, (2020-51).

Blau, F. D. and Kahn, L. M. (2017). The gender wage gap: Extent, trends, and explanations. *Journal of Economic Literature*, 55(3):789–865.

Brodeur, A., Clark, A. E., Fleche, S., and Powdthavee, N. (2021). COVID-19, lockdowns and well-being: Evidence from Google Trends. *Journal of Public Economics*, 193:104346.

Bursztyn, L., González, A. L., and Yanagizawa-Drott, D. (2020). Misperceived social norms: Women working outside the home in Saudi Arabia. *American Economic Review*, 110(10):2997–3029.

Carlson, D. L., Petts, R., and Pepin, J. (2020). US couples' divisions of housework and childcare during COVID-19 pandemic. (https://doi.org/10.31235/osf.io/jy8fn).

Champeaux, H. and Marchetta, F. (2021). Couples in lockdown,"la vie en rose"? evidence from France. *Working Paper*, (hal-03149087).

Del Boca, D., Oggero, N., Profeta, P., and Rossi, M. (2020). Women's work, housework and childcare, before and during COVID-19. *Review of Economics of the Households*, (18):1001–1017.

Ducoudré, B. and Périvier, H. (2020). L'emploi des femmes et des hommes pendant la période de confinement du 17 mars au 10 mai 2020. *Blog de l'OFCE*.

EVS (2011). European Values Study 1981-2008, longitudinal data file. GESIS Data Archive, Cologne, ZA4804 Data File Version 2.0.0, https://doi:10.4232/1.11005.

EVS (2020). European Values Study 2017: Integrated dataset (evs 2017). GESIS Data Archive, Cologne. ZA7500 Data file Version 4.0.0, https://doi.org/10.4232/1.13560.

Farré, L., Fawaz, Y., González, L., and Graves, J. (2020). How the COVID-19 lockdown affected gender inequality in paid and unpaid work in spain. *IZA Discussion Paper*, (DP No. 13434).

Fernández, R., Fogli, A., and Olivetti, C. (2004). Mothers and sons: Preference formation and female labor force dynamics. *The Quarterly Journal of Economics*, 119(4):1249–1299.

Fetzer, T., Hensel, L., Hermle, J., and Roth, C. (2020). Coronavirus perceptions and economic anxiety. *Review of Economics and Statistics*, pages 1–36.

Fortin, N. M. (2005). Gender role attitudes and the labour-market outcomes of women across OECD countries. *Oxford Review of Economic Policy*, 21(3):416–438.

Ginsburgh, V., Magerman, G., and Natali, I. (2021). COVID-19 and the role of inequality in French regional departments. *The European Journal of Health Economics*, 22(2):311–327.

Goldin, C. (2006). The quiet revolution that transformed women's employment, education, and family. *American Economic Review*, 96(2):1–21.

Huang, Y. and Zhao, N. (2020). Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. *Psychiatry Research*, page 112954.

Jost, J. T., Glaser, J., Kruglanski, A. W., and Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, 129(3):339.

Jost, J. T., Stern, C., Rule, N. O., and Sterling, J. (2017). The politics of fear: Is there an ideological asymmetry in existential motivation? *Social Cognition*, 35(4):324–353.

Kuziemko, I., Pan, J., Shen, J., and Washington, E. L. (2018). The Mommy Effect: Do women anticipate the employment effects of motherhood? *NBER Working Paper*, (w24740).

Lambert, A., Cayouette-Remblière, J., Guéraut, E., Bonvalet, C., Girard, V., Le Roux, G., and Langlois, L. (2020). Logement, travail, voisinage et conditions de vie: ce que le confinement a changé pour les français. *Working Paper*, (hal-02642242).

Le Barbanchon, T. and Sauvagnat, J. (2019). Voter bias and women in politics. *CEPR Discussion Paper*, (DP13238).

Lee, S. A. (2020). Coronavirus anxiety scale: A brief mental health screener for COVID-19 related anxiety. *Death Studies*, 44(7):393–401.

Sevilla, A. and Smith, S. (2020). Baby steps: the gender division of childcare during the covid-19 pandemic. *Oxford Review of Economic Policy*, 36(Supplement_1):S169–S186.

Slaughter, A.-M. (2015). *Unfinished business: Women men work family*. Simon and Schuster.

Wittenberg, A. (2020). What do countries with the best coronavirus responses have in common? women leaders. *Forbes*.

Table 1. Demographic characteristics, IPSOS and EVS survey respondents

	IPSOS Survey					EVS Survey				
	Count	Mean	SD	Min	Max	Count	Mean	SD	Min	Max
Female	1,000	0.49	0.500	0	1	871	0.52	0.500	0	1
Age	1,000	41.69	11.766	18	75	871	42.21	11.982	18	81
Single	1,000	0.26	0.436	0	1	870	0.24	0.427	0	1
Married	1,000	0.39	0.489	0	1	870	0.34	0.474	0	1
Civil partnership	1,000	0.09	0.283	0	1	871	0.09	0.287	0	1
Cohabitation	1,000	0.19	0.390	0	1	871	0.14	0.350	0	1
Divorced	1,000	0.05	0.214	0	1	870	0.10	0.302	0	1
Separated	1,000	0.02	0.153	0	1	870	0.07	0.250	0	1
Widowed	1,000	0.01	0.071	0	1	870	0.02	0.134	0	1
Respondent with children	1,000	0.41	0.493	0	1	871	0.48	0.500	0	1
At least one child 12 y.o. or under	1,000	0.31	0.464	0	1	871	0.33	0.471	0	1
Number of children	413	1.65	0.740	1	5	416	1.78	0.789	1	4
Education: Less than *Baccalauréat*	1,000	0.17	0.375	0	1	871	0.34	0.473	0	1
Education: High school graduate	1,000	0.23	0.419	0	1	866	0.20	0.403	0	1
Education: Two years post graduate	1,000	0.23	0.423	0	1	871	0.19	0.389	0	1
Education: Higher education	1,000	0.37	0.483	0	1	869	0.27	0.446	0	1
Income: 0 to 21,000	909	0.23	0.418	0	1	803	0.27	0.446	0	1
Income: 21,001 to 36,000	909	0.40	0.489	0	1	803	0.32	0.466	0	1
Income: 36,001 to 48,000	909	0.19	0.393	0	1	803	0.24	0.428	0	1
Income: Above 48,000	909	0.19	0.391	0	1	803	0.17	0.373	0	1
Life satisfaction	1,000	7.24	1.919	1	10	870	7.55	1.788	1	10

Source: EVS and IPSOS Survey (2020).

Notes: In the EVS, we selected the 871 individuals who had a professional activity when they were surveyed, to match the sample from IPSOS. The "Higher education" variable includes individuals who have at least a Bachelor's degree (in France, a degree validating three years of higher education). The "Number of children" variable only takes into account respondents who have at least one child living in the household (18 or younger).

Table 2. Descriptive statistics, before and during lockdown, by gender

	Before lockdown			During lockdown		
	Mean		t-test	Mean		t-test
	Male	Female	p-value	Male	Female	p-value
Panel A: Agreement with statements						
Statement (1): Kids	0.13	0.18	0.041	0.24	0.24	0.894
Statement (2): Family	0.22	0.31	0.002	0.25	0.27	0.584
Statement (3): Home	0.29	0.28	0.760	0.28	0.25	0.326
Statement (4): Money	0.05	0.05	0.919	0.16	0.11	0.009
Statement (5): Politics	0.05	0.09	0.034	0.17	0.09	0.000
Statement (6): Business	0.07	0.04	0.142	0.17	0.07	0.000
Panel B: Time spent on household production						
Childcare: Male more time	0.19	0.09	0.012	0.15	0.11	0.270
Housework: Male more time	0.14	0.10	0.257	0.20	0.18	0.376
Panel C: Impact of lockdown on type of work						
Hours worked per week	37.03	34.44	0.000	22.94	19.29	0.001
Not working	–	–	–	0.28	0.36	0.010
Working from home	–	–	–	0.29	0.35	0.030
Working outside	–	–	–	0.36	0.23	0.000
Mixed WFH & outside	–	–	–	0.07	0.06	0.776
Hours worked: partner	34.67	38.20	0.000	21.11	24.22	0.038
Not working: partner	0.17	0.18	0.833	0.40	0.41	0.795
Working from home: partner	–	–	–	0.31	0.25	0.071
Working outside: partner	–	–	–	0.24	0.29	0.133
Mixed WFH & outside: partner	–	–	–	0.06	0.06	0.922

Source: IPSOS Survey (2020).

Notes: Panel A shows descriptive statistics for the main outcome variables, which are binary variables equal to one if response is "Agree" or "Strongly Agree" for each statement. Statements are (1) Kids: "When a mother works for pay, the children suffer". (2) Family: "All in all, family life suffers when the woman has a fulltime job". (3) Home: "A job is alright but what most women really want is a home and children". (4) Money: "A man's job is to earn money; a woman's job is to look after the home and family". (5) Politics: "On the whole, men make better political leaders than women do". (6) Business: "On the whole, men make better business executives than women do". The number of IPSOS observations for each statement is as follows: Statement (1) has 936 observations, Statement (2) has 947 observations, Statement (3) has 898 observations, Statement (4) has 968 observations, Statement (5) has 912 observations, and Statement (6) has 927 observations.
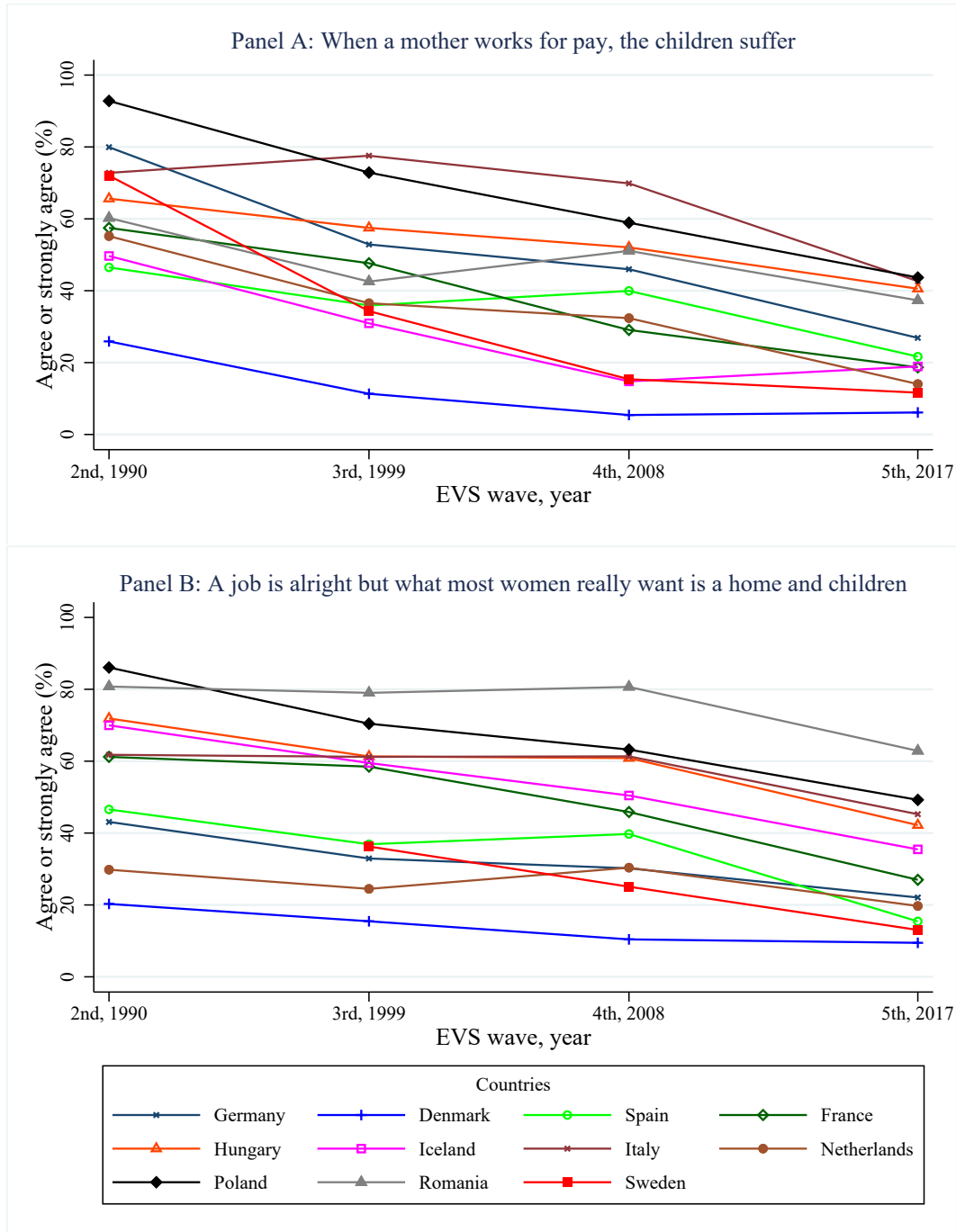
Table 3. Impact of lockdown on beliefs in gender roles, benchmark model

Statement:	(1) Kids	(2) Family	(3) Home	(4) Money	(5) Politics	(6) Business
Dependent variable:	"Agree" or "Strongly Agree" with Statement					
Lockdown	0.095***	0.025	-0.015	0.096***	0.123***	0.109***
	(0.027)	(0.030)	(0.032)	(0.022)	(0.023)	(0.023)
Female	0.049**	0.087***	-0.026	-0.012	0.029	-0.022
	(0.025)	(0.029)	(0.031)	(0.015)	(0.018)	(0.016)
Lockdown × Female	-0.048	-0.062	-0.001	-0.045	-0.116***	-0.074***
	(0.037)	(0.041)	(0.043)	(0.028)	(0.029)	(0.027)
Constant	0.245***	0.284***	0.489***	0.182***	0.187***	0.095*
	(0.063)	(0.069)	(0.080)	(0.049)	(0.052)	(0.049)
Observations	1,705	1,721	1,643	1,755	1,662	1,689
R-squared	0.075	0.070	0.049	0.066	0.068	0.050

Source: IPSOS Survey (2020).

Notes: The dependent variable is a binary variable equal to one if response is "Agree" or "Strongly Agree" for each of the following statements. (1) Kids: "When a mother works for pay, the children suffer". (2) Family: "All in all, family life suffers when the woman has a fulltime job". (3) Home: "A job is alright but what most women really want is a home and children". (4) Money: "A man's job is to earn money; a woman's job is to look after the home and family". (5) Politics: "On the whole, men make better political leaders than women do". (6) Business: "On the whole, men make better business executives than women do". All columns control for the following characteristics: age, level of education, number of children, marital status, household income categories, number of hours worked, and region fixed effects. Significance levels: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Robust standard errors in parenthesis.

Figure 1. Changes in beliefs in gender norms in European countries, 1990-2018

Panel A: When a mother works for pay, the children suffer

Panel B: A job is alright but what most women really want is a home and children

Countries

Germany · Denmark · Spain · France · Hungary · Iceland · Italy · Netherlands · Poland · Romania · Sweden

Notes: This figure shows the overall decrease in beliefs in unequal gender norms since 1990, in European countries. Panel A and Panel B include the two statements for which the EVS has collected beliefs over time; the first time it collected these beliefs was in 1990, for the second wave of its survey.

Figure 2. Correlation between gender equality norms and enrolment rates in early childhood education and care services, OECD countries
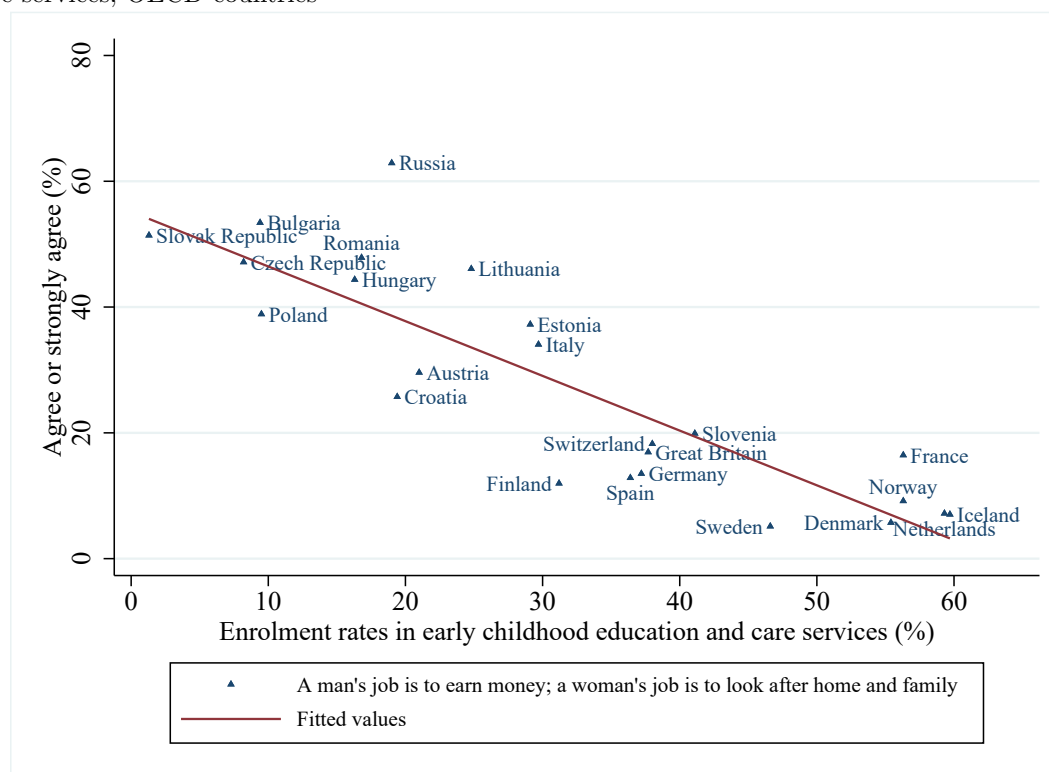
Source: The data for gender norms are from the fifth wave (2017) of the EVS (EVS, 2020). The data for enrolment rates are from the OECD Family Database, and are for 2017 or the latest year available. The OECD defines these enrolment rates as the "percent of children enrolled in early childhood education and care services (ISCED 0 and other registered ECEC services), 0- to 2-year-old". The EVS data are available at `https://europeanvaluesstudy.eu/methodology-data-documentation/survey-2017/`. The OECD data are available at `https://www.oecd.org/els/family/database.htm`, Table PF3.2.

Notes: This figure presents the correlation between the percentage of individuals who agree or strongly agree with the statement "a man's job is to earn money; a woman's job is to look after home and family" and the enrolment rates in early childhood education and care services in European countries. The value of the Pearson correlation is 0.86 and is significant at the 1% level.

Figure 3. Correlation between gender equality norms and maternal employment rates, OECD countries
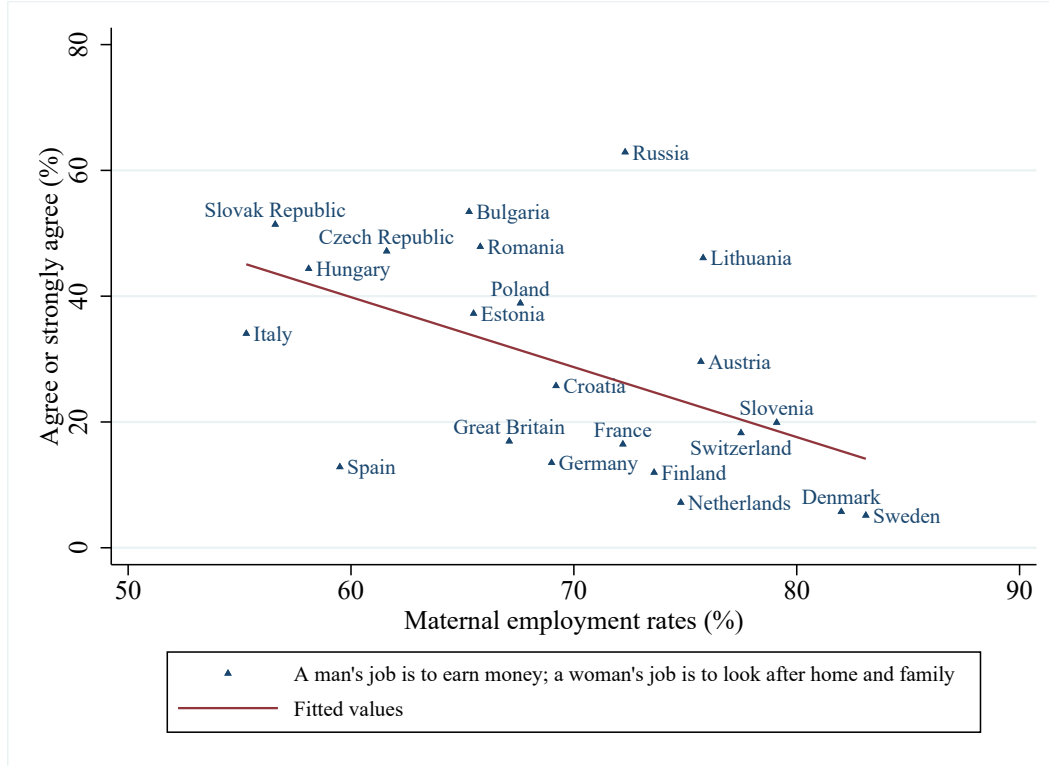
Source: The data for gender norms are from the fifth wave of the EVS (EVS, 2020). The data for maternal employment rates are from the OECD Family Database, and are for 2019 or the latest year available. The OECD defines maternal employment rates as employment rates for women (15-64 year olds) with at least one child aged 0-14, who are working full-time or part-time. The EVS data are available at `https://europeanvaluesstudy.eu/methodology-data-documentation/survey-2017/`. The OECD data are available at `https://www.oecd.org/els/family/database.htm`, Table LMF1.2.

Notes: This figure presents the correlation between the percentage of individuals who agree or strongly agree with the statement "a man's job is to earn money; a woman's job is to look after home and family" and maternal employment rates in European countries. The value of the Pearson correlation is 0.51 and is significant at the 5% level.

Figure 4. Changes in beliefs in gender norms in France, between 1990 and 2020
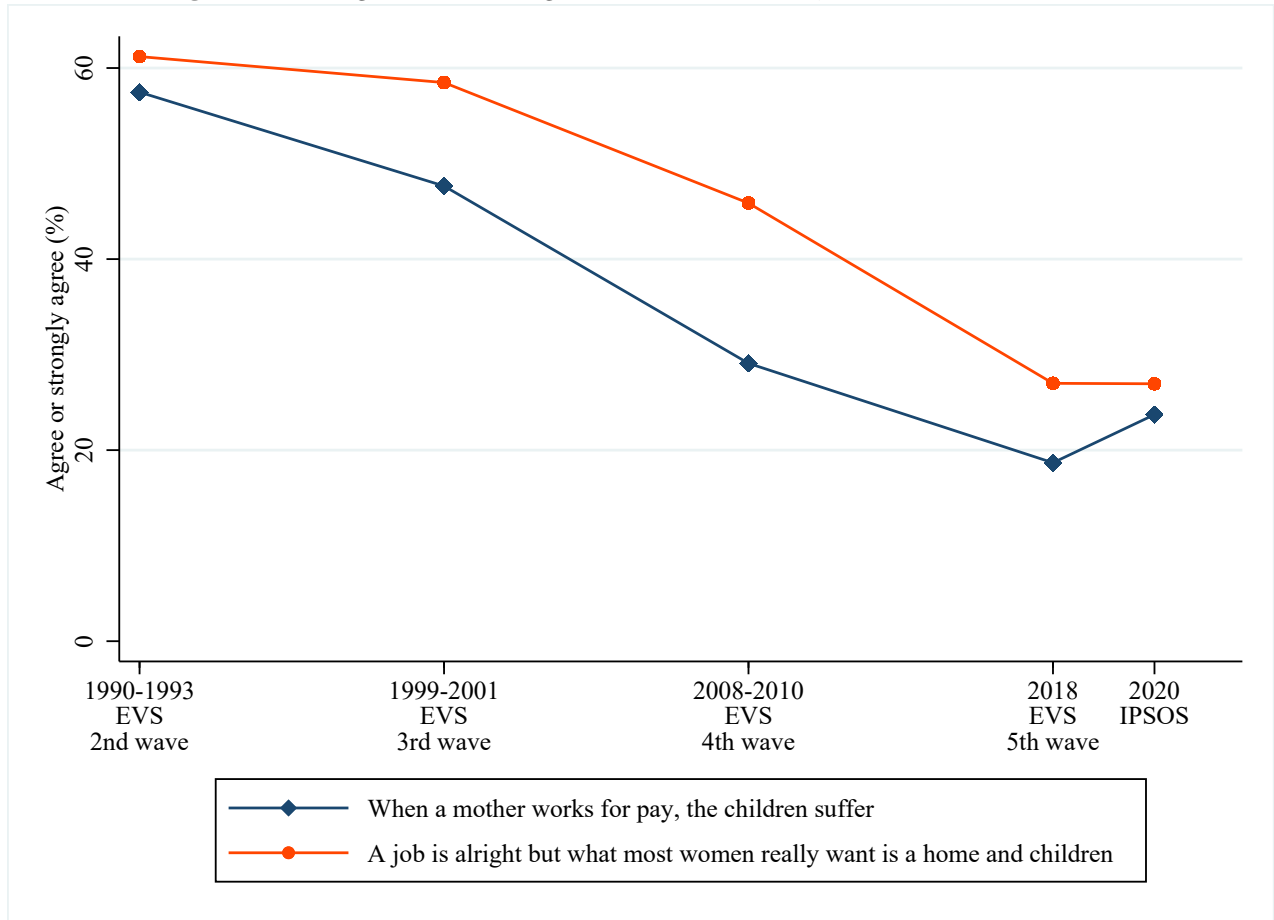
Notes: This figure shows the change over time of respondents' opinions about two statements regarding gender norms that the EVS has included in its survey since 1990. In France, the EVS collected data for its 2nd wave between 1990 and 1993, its 3rd wave between 1999 and 2001, its fourth wave between 2008 and 2010, and its fifth wave in 2018. We included these two statements in our IPSOS survey; the data were collected in May 2020. For each wave, we selected EVS respondents who were either employed (full-time or part-time) or self-employed, before calculating the percentage of respondents who either agree or strongly agree with each statement.

Figure 5. Impact of lockdown on time spent on childcare and housework by individuals in heterosexual couples, by job situation
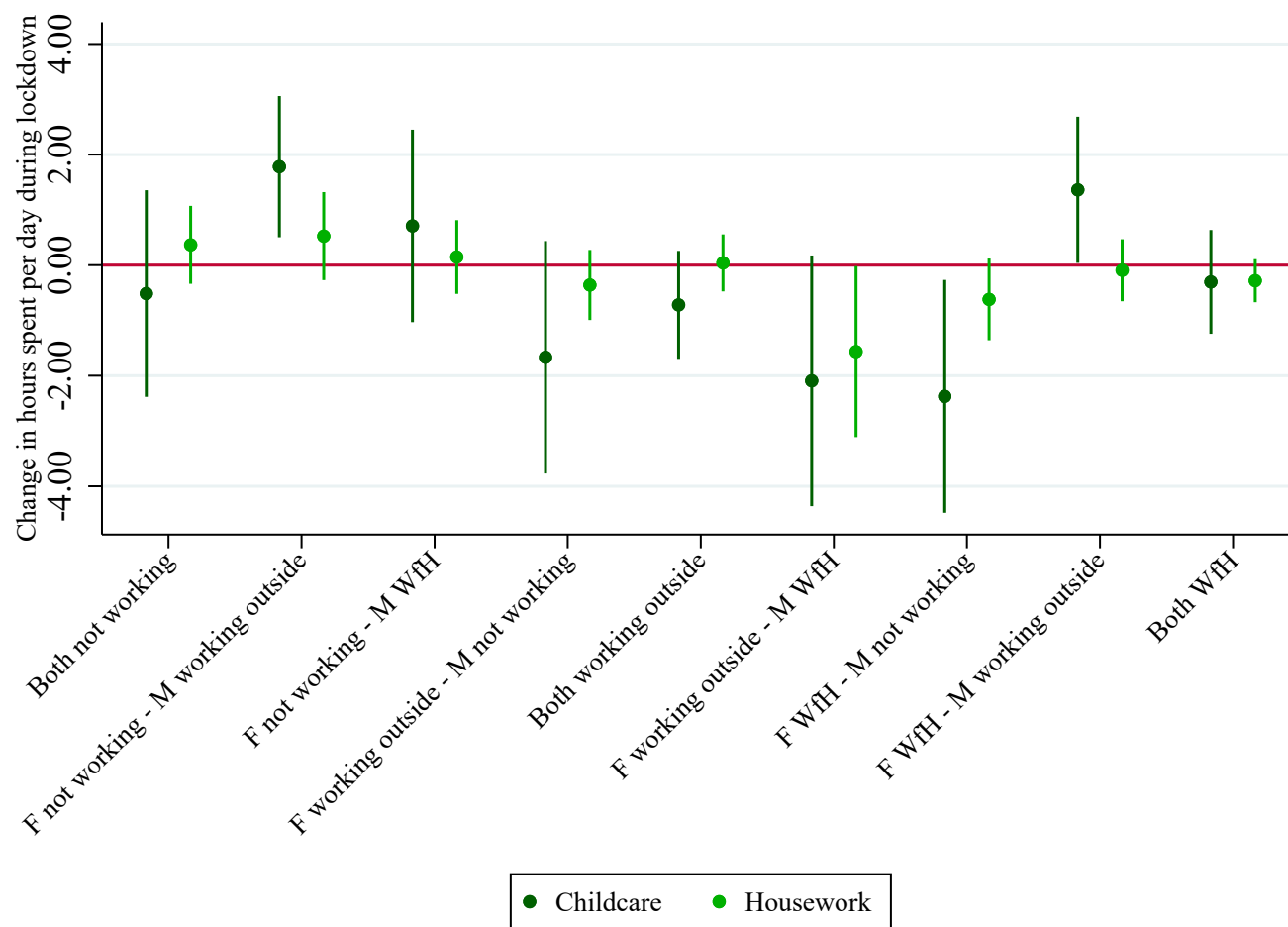
Source: IPSOS Survey (2020).

Notes: This figure presents the nine situations that heterosexual couples were in during the first lockdown period. Each partner, male (M) or female (F) was either not working, working from home (WfH) or working outside the home (outside). We included respondents who declared working partly from home, partly outside from home, in the WfH category. The vertical axis shows the change in relative time spent (in number of hours) by the female and the male partner on either childcare (dark green) or housework (light green). A positive value means that the female partner increased the time she spent on childcare or housework compared to her male partner during lockdown. A negative value suggests that the male partner spent relatively more time on the activity than his female partner during lockdown, compared to before lockdown. The estimated model controls for the following characteristics: age, level of education, number of children, marital status, family income categories, number of hours worked, and region fixed effects. Bars represent 95% confidence intervals.

Figure 6. Impact of lockdown on respondents' beliefs in gender norms, by having children twelve or under living in the household
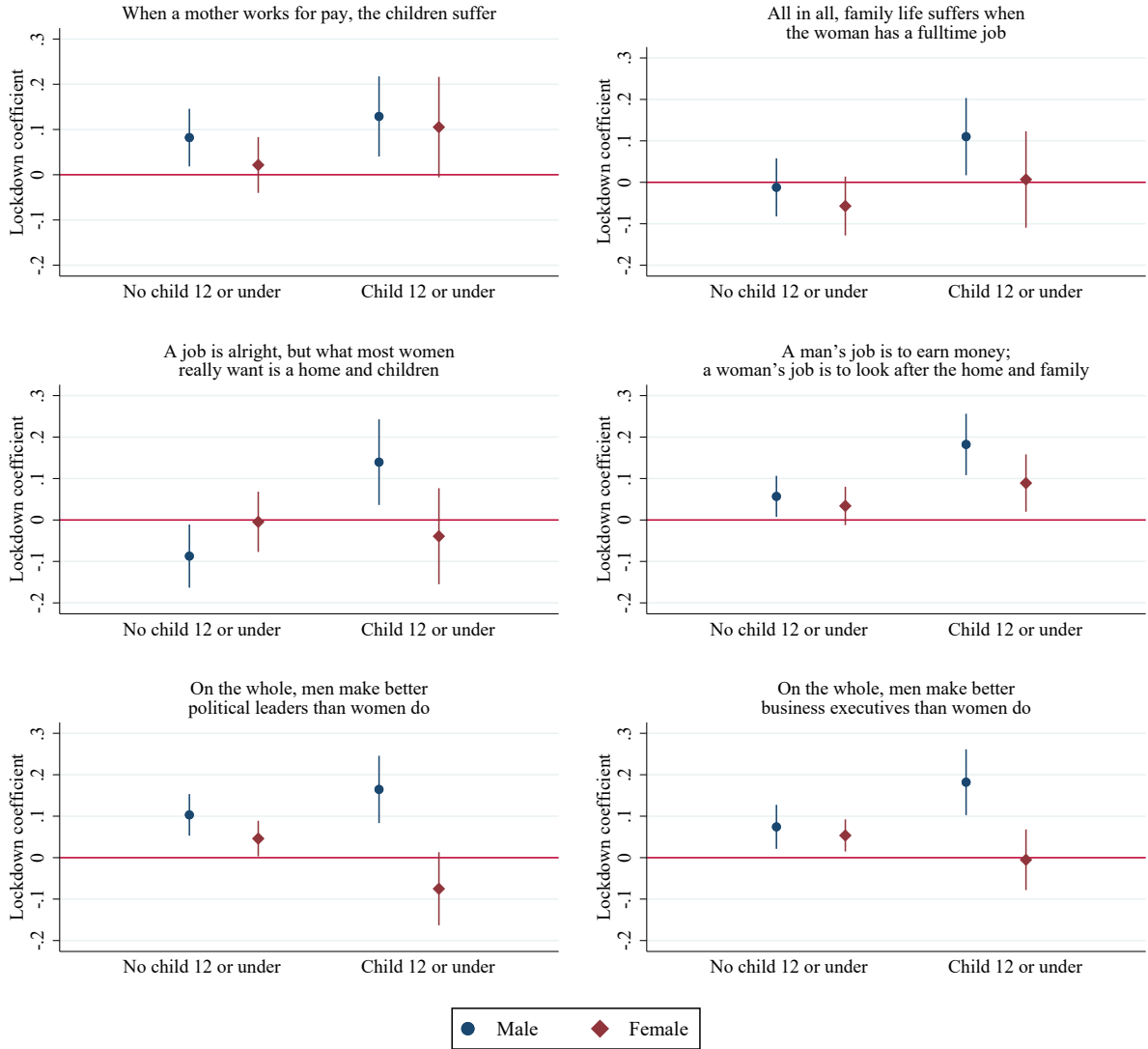
Notes: This figure shows the marginal effect of lockdown on the probability of agreeing with each statement for four groups of individuals: men with and without children twelve years old or under, and women with and without children twelve years old or under. To calculate these coefficients, we use the regressions for which we present the results in Table A3. All respondents (single individuals, same-sex couples, and heterosexual couples) are included in the results we present. Bars represent 95% confidence intervals.

The full model estimated in Table A3 is:

$$Y_{it} = \alpha + \gamma_1 Lockdown_{it} + \gamma_2 Female_i + \gamma_3 Lockdown_{it} \times Female_i$$
$$+ \gamma_4 Childbelow12_i + \gamma_5 Lockdown_{it} \times Childbelow12_i$$
$$+ \gamma_6 Female_i \times Childbelow12_{it} + \gamma_7 Lockdown_{it} \times Childbelow12_i \times Female_i + \boldsymbol{X}_{it} + \epsilon_{it},$$

and the corresponding marginal effects that we show in this Figure are equal to:

- γ_1 for men without children who are 12 years old or under
- $\gamma_1 + \gamma_5$ for men with children who are 12 years old or under
- $\gamma_1 + \gamma_3$ for women without children who are 12 years old or under
- $\gamma_1 + \gamma_3 + \gamma_5 + \gamma_7$ for women with children who are 12 years old or under.

Figure 7. Impact of lockdown on respondents' beliefs in gender norms, by time spent on childcare
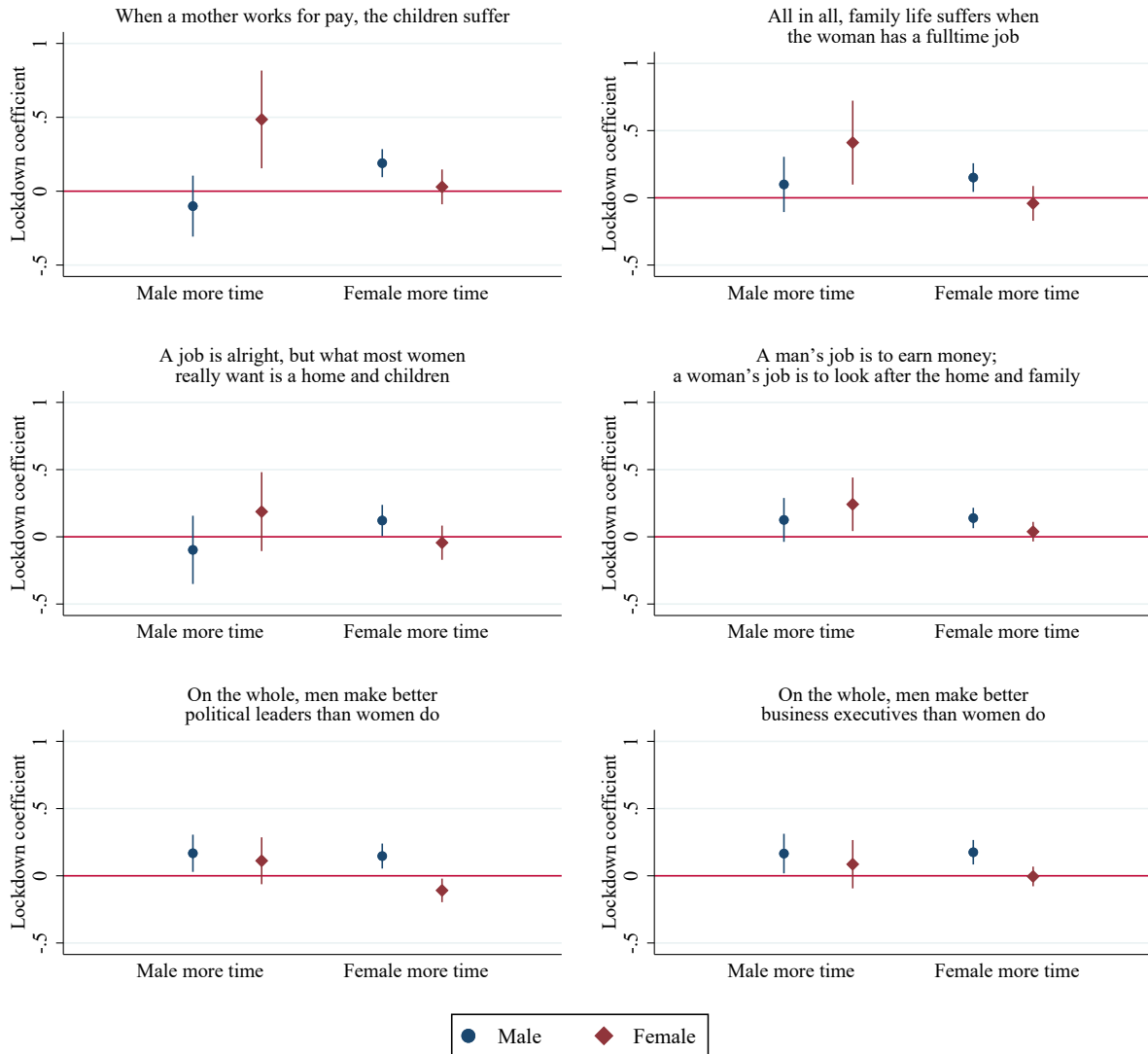
Notes: This figure shows the marginal effect of lockdown on the probability of agreeing with each statement for four groups of individuals: men spending more or less time than their female partner on childcare, and women spending more or less time than their male partner on childcare. "Female more time" represents the situations where the female partner spent more or as much time as the male partner on childcare, whereas "Male more time" represents the situations where the male partner spent more time on childcare than the female partner. To calculate these coefficients, we use the regressions for which we present the results in Panel A of Table A4 in the Appendix. Only heterosexual couples with children (all ages) are included in the results we present. Bars represent 95% confidence intervals.

Figure 8. Impact of lockdown on respondents' beliefs in gender norms, by time spent on housework
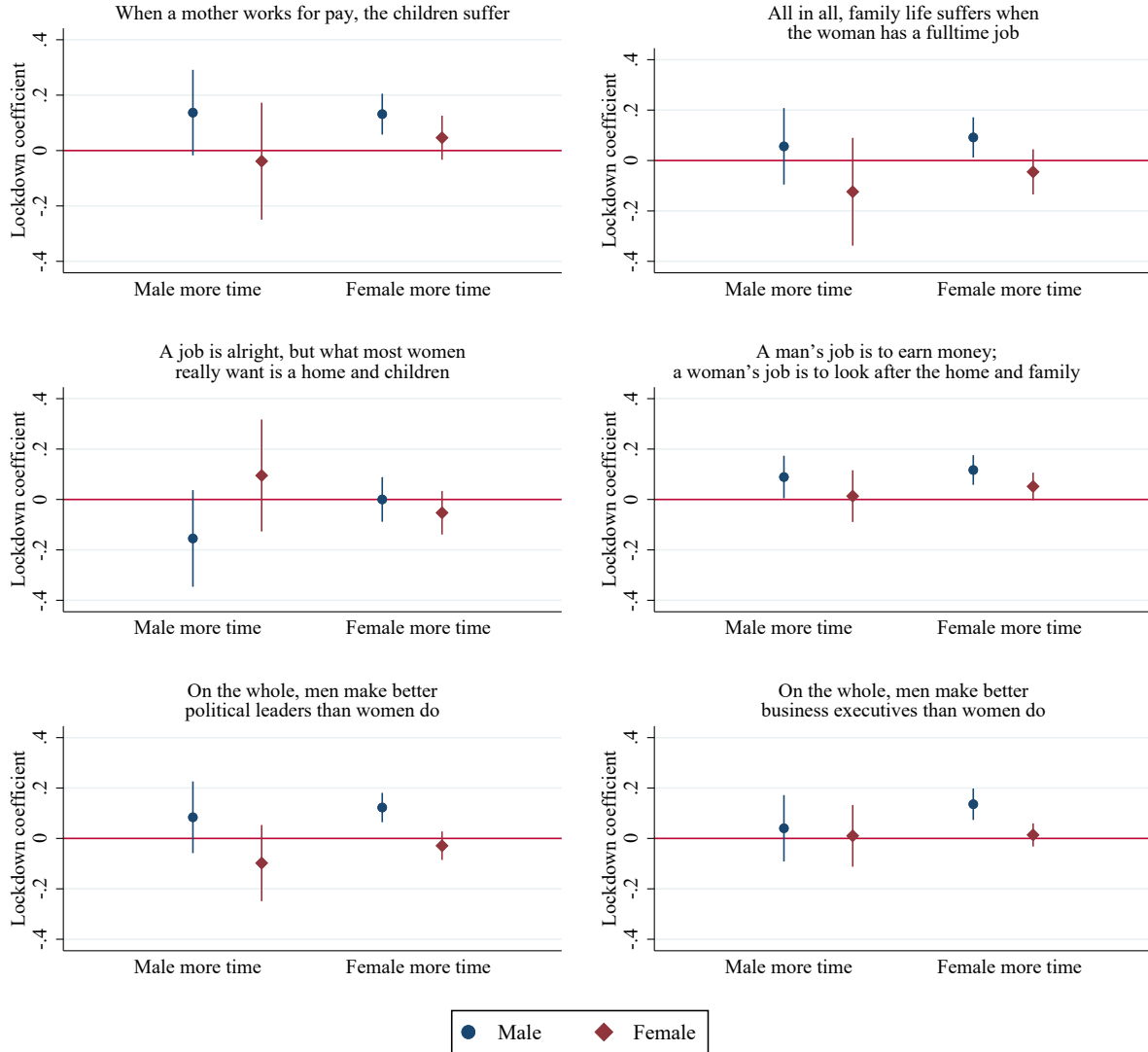
Notes: This figure shows the changes in the percentage of male and female respondents declaring that they either agree or strongly agree with each statement during lockdown, as a function of whether the female partner or the male partner spent relatively more time on housework during lockdown. "Female more time" represents situations where the female partner spent more time or as much time as the male partner on housework, whereas "Male more time" represents situations where the male partner spent more time on housework than the female partner. To calculate these coefficients, we use the regressions for which we present the results in Panel B of Table A4 in the Appendix. The sample includes all heterosexual couples. Bars represent 95% confidence intervals.

Figure 9. Impact of lockdown on respondents' beliefs in gender norms, by household income

Notes: This figure shows the marginal effect of lockdown on the probability of agreeing with each statement for four groups of individuals: men with household income below or above an annual income of 48,000 (for the household), and women with household income below or above an annual income of 48,000 (for the household). To calculate these coefficients, we use the regressions for which we present the results in Panel A of Table A5 in the Appendix. All respondents (single, same-sex couples, and heterosexual couples) are included in the results we present. Bars represent 95% confidence intervals.

Figure 10. Impact of lockdown on respondents' beliefs in gender norms, by level of education
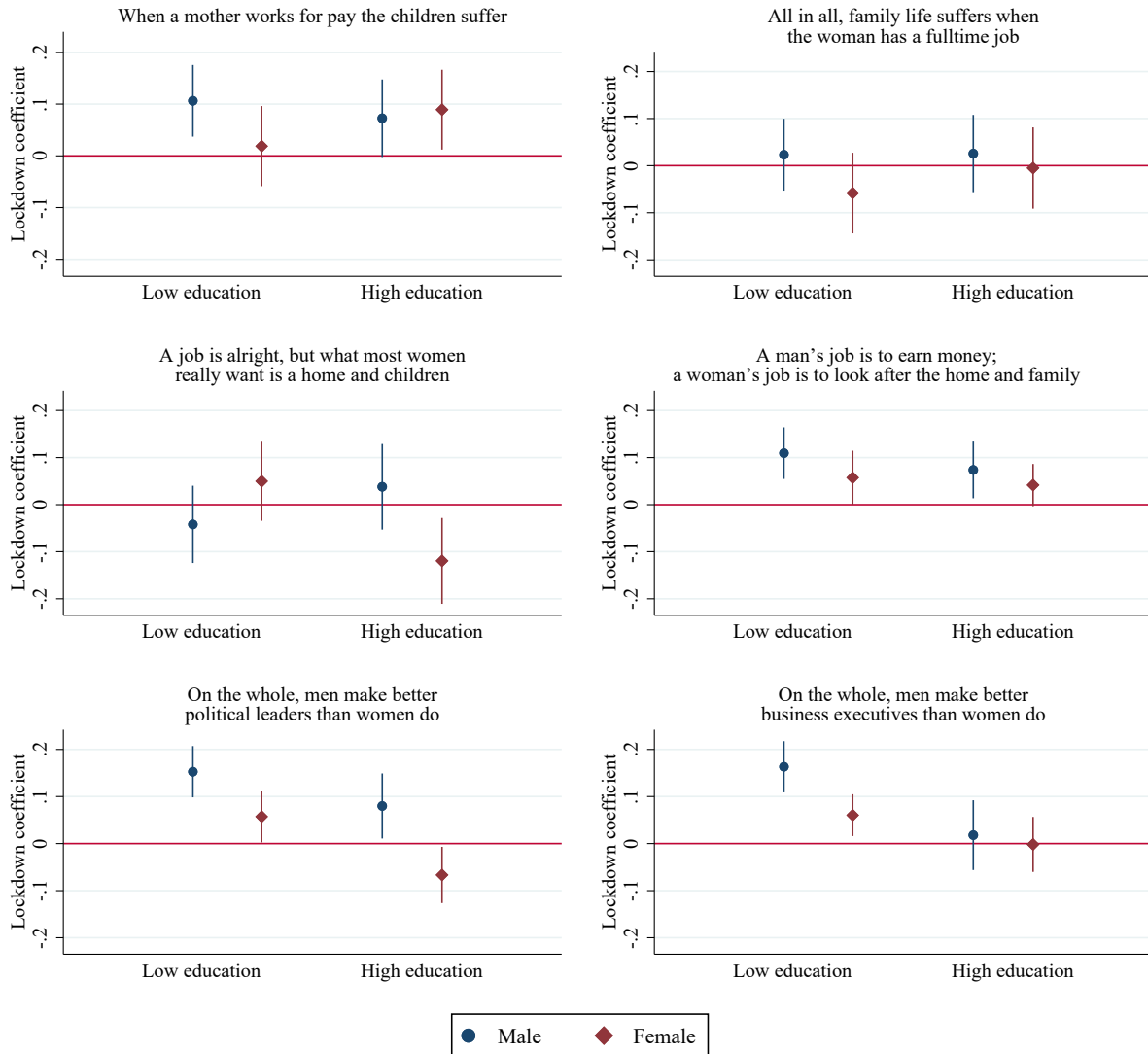
When a mother works for pay the children suffer

All in all, family life suffers when the woman has a fulltime job

A job is alright, but what most women really want is a home and children

A man's job is to earn money; a woman's job is to look after the home and family

On the whole, men make better political leaders than women do

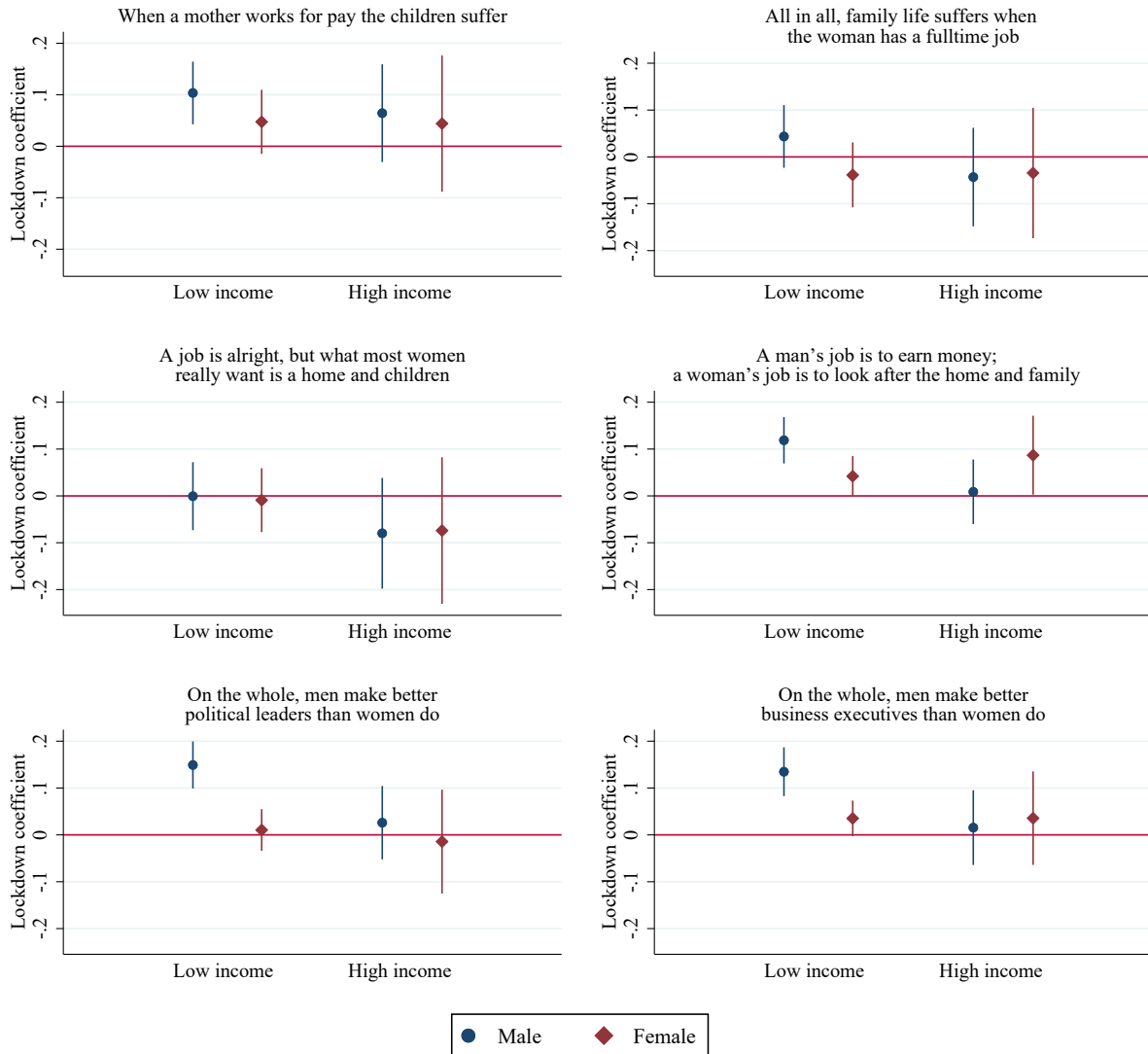On the whole, men make better business executives than women do

● Male   ◆ Female

Notes: This figure shows the marginal effect of lockdown on the probability of agreeing with each statement for four groups of respondents: men with low or high educational level, and women with low or high educational level. A high level of education corresponds to a respondent who obtained at least the equivalent of a Bachelor's degree (three years after high school). To calculate these coefficients, we use the regressions for which we present the results in Panel B of Table A5 in the Appendix. All respondents (single, same-sex couples, and heterosexual couples) are included in the results we present. Bars represent 95% confidence intervals.

Table A1. Percentage of respondents from each region of France, EVS and IPSOS samples

Region of France	EVS	IPSOS
Auvergne-Rhône-Alpes	11.83	15.00
Bourgogne-Franche-Comté	4.94	5.30
Bretagne	5.74	4.70
Centre-Val de Loire	3.44	3.80
Corse	0.00	0.40
Grand Est	8.38	7.60
Hauts-de-France	8.15	9.10
Ile-de-France	20.09	20.40
Normandie	6.20	4.40
Nouvelle-Aquitaine	11.83	8.60
Occitanie	7.46	8.00
PACA	5.40	5.60
Pays de la Loire	6.54	7.10

Source: EVS and IPSOS Survey (2020).

Table A2. Job combinations between partners during lockdown

Job combinations	Freq.	Percent
F not working & M not working	122	19.65
F not working & M working outside	57	9.18
F not working & M working from home	59	9.50
F working outside & M not working	42	6.76
F working outside & M working outside	74	11.92
F working outside & M working from home	30	4.83
F working from home & M not working	51	8.21
F working from home & M working outside	75	12.08
F working from home & M working from home	111	17.87
Total	621	100

Source: IPSOS Survey (2020).

Notes: Only heterosexual couples are included. "F" stands for female, and "M" stands for male.

Table A3. Impact of lockdown on respondents' beliefs in gender norms, by having children twelve years old or under living in the household

Statement:	(1) Kids	(2) Family	(3) Home	(4) Money	(5) Politics	(6) Business
Dependent variable:	"Agree" or "Strongly Agree" with Statement					
Lockdown	0.082**	-0.012	-0.087**	0.057**	0.103***	0.074***
	(0.032)	(0.036)	(0.039)	(0.025)	(0.026)	(0.027)
Female	0.009	0.004	-0.124***	-0.018	-0.019	-0.058***
	(0.029)	(0.036)	(0.038)	(0.020)	(0.017)	(0.018)
Lockdown × Female	-0.061	-0.045	0.083	-0.023	-0.057*	-0.021
	(0.043)	(0.049)	(0.052)	(0.033)	(0.032)	(0.031)
Child below 12	-0.037	-0.138***	-0.183***	-0.051**	-0.018	-0.044*
	(0.035)	(0.039)	(0.043)	(0.022)	(0.026)	(0.025)
Lockdown × Child below 12	0.047	0.122**	0.227***	0.125***	0.062	0.108**
	(0.054)	(0.058)	(0.064)	(0.044)	(0.047)	(0.047)
Female × Child below 12	0.132**	0.268***	0.305***	0.021	0.156***	0.115***
	(0.054)	(0.061)	(0.064)	(0.031)	(0.044)	(0.036)
Lockdown × Female × Child below 12	0.037	-0.058	-0.261***	-0.070	-0.183***	-0.166***
	(0.083)	(0.088)	(0.093)	(0.060)	(0.068)	(0.062)
Constant	0.251***	0.350***	0.526***	0.191***	0.210***	0.115**
	(0.065)	(0.071)	(0.081)	(0.051)	(0.053)	(0.050)
Observations	1,705	1,721	1,643	1,755	1,662	1,689
R-squared	0.087	0.089	0.065	0.072	0.076	0.056

Source: IPSOS Survey (2020).

Notes: The dependent variable is a binary variable equal to one if response is "Agree" or "Strongly Agree" for each of the following statements. (1) Kids: "When a mother works for pay, the children suffer". (2) Family: "All in all, family life suffers when the woman has a fulltime job". (3) Home: "A job is alright but what most women really want is a home and children". (4) Money: "A man's job is to earn money; a woman's job is to look after the home and family". (5) Politics: "On the whole, men make better political leaders than women do". (6) Business: "On the whole, men make better business executives than women do". All columns control for the following characteristics: age, number of children, marital status, household income categories, level of education, number of hours worked, and region fixed effects. Corresponding marginal effects can be found in Figure 6. Significance levels: *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors are in parentheses.

Table A4. Impact of lockdown on respondents' beliefs in gender norms, by time spent in childcare and housework

Statement:	(1) Kids	(2) Family	(3) Home	(4) Money	(5) Politics	(6) Business
Dependent variable:	"Agree" or "Strongly Agree" with Statement					
Panel A: Childcare time gap						
Lockdown	0.190***	0.151***	0.121**	0.140***	0.147***	0.175***
	(0.048)	(0.054)	(0.059)	(0.039)	(0.047)	(0.046)
Female	0.164***	0.281***	0.188***	0.003	0.092**	0.001
	(0.046)	(0.055)	(0.058)	(0.028)	(0.044)	(0.035)
Lockdown × Female	-0.160**	-0.192**	-0.165**	-0.102**	-0.255***	-0.180***
	(0.073)	(0.080)	(0.082)	(0.051)	(0.063)	(0.056)
Male more time with kids	0.118	-0.032	0.139	-0.007	-0.077**	-0.069**
	(0.082)	(0.079)	(0.099)	(0.040)	(0.032)	(0.028)
Lockdown × Male more time with kids	-0.291**	-0.051	-0.219	-0.014	0.021	-0.010
	(0.114)	(0.115)	(0.141)	(0.090)	(0.083)	(0.085)
Female × Male more time with kids	-0.276**	-0.239*	-0.443***	-0.043	-0.111**	0.019
	(0.133)	(0.130)	(0.147)	(0.050)	(0.055)	(0.047)
Lockdown × Female × Male more time with kids	0.747***	0.503**	0.450**	0.218	0.200	0.101
	(0.209)	(0.204)	(0.213)	(0.139)	(0.128)	(0.131)
Constant	0.264**	0.204	0.390***	0.249***	0.150	0.117
	(0.125)	(0.135)	(0.149)	(0.093)	(0.108)	(0.097)
Observations	578	580	554	583	548	556
R-squared	0.133	0.139	0.104	0.110	0.121	0.108
Panel B: Housework time gap						
Lockdown	0.131***	0.092**	0.000	0.117***	0.123***	0.136***
	(0.038)	(0.041)	(0.045)	(0.030)	(0.030)	(0.032)
Female	0.060*	0.157***	0.009	-0.007	0.051**	-0.009
	(0.035)	(0.040)	(0.043)	(0.021)	(0.025)	(0.021)
Lockdown × Female	-0.085	-0.137**	-0.053	-0.065	-0.152***	-0.122***
	(0.054)	(0.058)	(0.061)	(0.040)	(0.040)	(0.037)
Male more time housework	-0.069	-0.099	0.029	-0.072***	0.051	0.038
	(0.058)	(0.065)	(0.089)	(0.018)	(0.054)	(0.051)
Lockdown × Male more time housework	0.005	-0.035	-0.155	-0.028	-0.039	-0.095
	(0.085)	(0.085)	(0.107)	(0.051)	(0.078)	(0.072)
Female × Male more time housework	0.207**	0.176	-0.075	0.046	-0.020	-0.029
	(0.105)	(0.112)	(0.127)	(0.044)	(0.088)	(0.070)
Lockdown × Female × Male more time housework	-0.090	-0.043	0.303*	-0.010	-0.030	0.092
	(0.144)	(0.146)	(0.162)	(0.079)	(0.111)	(0.097)
Constant	0.188**	0.240**	0.472***	0.222***	0.174**	0.108*
	(0.088)	(0.096)	(0.109)	(0.067)	(0.072)	(0.062)
Observations	1,059	1,081	1,033	1,093	1,023	1,045
R-squared	0.103	0.105	0.053	0.078	0.081	0.065

Source: IPSOS Survey (2020).

Notes: See Table A3 for the description of the six statements. All columns control for the following characteristics: age, level of education, number of children, marital status, household income categories, number of hours worked, and region fixed effects. The estimation samples include couples with non missing information on both respondent and partner time use. Corresponding marginal effects can be found in Figures 7 and 8. Significance levels: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Robust standard errors are in parentheses.

Table A5. Impact of lockdown on respondents' beliefs in gender norms, by household income and respondent level of education

Statement:	(1) Kids	(2) Family	(3) Home	(4) Money	(5) Politics	(6) Business
Dependent variable:	"Agree" or "Strongly Agree" with Statement					
Panel A: By level of household income						
Lockdown	0.104***	0.044	-0.001	0.119***	0.149***	0.135***
	(0.031)	(0.034)	(0.037)	(0.025)	(0.026)	(0.027)
Female	0.041	0.089***	-0.048	-0.002	0.028	-0.024
	(0.028)	(0.033)	(0.034)	(0.018)	(0.019)	(0.017)
Lockdown × Female	-0.056	-0.082*	-0.008	-0.077**	-0.139***	-0.100***
	(0.042)	(0.047)	(0.049)	(0.032)	(0.032)	(0.031)
Higher income	-0.034	-0.029	-0.056	0.010	0.003	-0.002
	(0.037)	(0.047)	(0.052)	(0.027)	(0.030)	(0.031)
Lockdown × Higher income	-0.039	-0.087	-0.079	-0.110***	-0.123***	-0.119**
	(0.056)	(0.062)	(0.070)	(0.042)	(0.046)	(0.047)
Female × Higher income	0.047	0.003	0.150*	-0.028	0.024	0.017
	(0.060)	(0.072)	(0.081)	(0.034)	(0.051)	(0.046)
Lockdown × Female × Higher income	0.036	0.091	0.014	0.155**	0.098	0.120*
	(0.093)	(0.100)	(0.111)	(0.063)	(0.075)	(0.071)
Constant	0.247***	0.267***	0.474***	0.145***	0.176***	0.105**
	(0.063)	(0.069)	(0.078)	(0.049)	(0.051)	(0.049)
Observations	1,705	1,721	1,643	1,755	1662	1,689
R-squared	0.076	0.071	0.052	0.067	0.074	0.055
Panel B: By level of education of the respondent						
Lockdown	0.106***	0.023	-0.042	0.109***	0.153***	0.163***
	(0.035)	(0.039)	(0.042)	(0.028)	(0.028)	(0.028)
Female	0.074**	0.111***	-0.109***	0.001	0.026	-0.005
	(0.035)	(0.040)	(0.040)	(0.022)	(0.021)	(0.016)
Lockdown × Female	-0.088*	-0.082	0.092	-0.052	-0.095**	-0.103***
	(0.051)	(0.056)	(0.057)	(0.038)	(0.037)	(0.034)
Higher Education	-0.053*	-0.083**	-0.174***	-0.005	0.027	0.081***
	(0.032)	(0.039)	(0.043)	(0.023)	(0.025)	(0.029)
Lockdown × Higher Education	-0.034	0.002	0.080	-0.036	-0.073*	-0.145***
	(0.050)	(0.055)	(0.061)	(0.040)	(0.043)	(0.045)
Female × Higher Education	-0.070	-0.066	0.219***	-0.036	0.006	-0.047
	(0.047)	(0.058)	(0.061)	(0.030)	(0.038)	(0.037)
Lockdown × Female × Higher Education	0.104	0.051	-0.249***	0.020	-0.051	0.083
	(0.074)	(0.081)	(0.087)	(0.054)	(0.059)	(0.057)
Constant	0.198***	0.244***	0.487***	0.153***	0.165***	0.060
	(0.063)	(0.072)	(0.080)	(0.049)	(0.051)	(0.048)
Observations	1,705	1,721	1,643	1,755	1,662	1,689
R-squared	0.071	0.068	0.053	0.065	0.073	0.058

Source: IPSOS Survey (2020).

Notes: See Table A3 for the description of the six statements. All columns control for the following characteristics: age, level of education, number of children, marital status, household income categories, number of hours worked, and region fixed effects. Corresponding marginal effects can be found in Figures 9 and 10. Significance levels: *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Robust standard errors are in parentheses.

Table A6. Impact of lockdown on respondents' beliefs in gender norms, Cross-sectional evidence

Statement:	(1) Kids	(2) Family	(3) Home	(4) Money	(5) Politics	(6) Business
Dependent variable:			"Agree" or "Strongly Agree" with Statement			
Lockdown	0.095***	0.060**	0.044	0.101***	0.115***	0.104***
	(0.028)	(0.029)	(0.032)	(0.022)	(0.023)	(0.023)
Female	0.041	0.077**	0.002	-0.009	0.020	-0.012
	(0.027)	(0.031)	(0.031)	(0.019)	(0.019)	(0.018)
Lockdown x Female	-0.040	-0.059	-0.025	-0.045	-0.104***	-0.085***
	(0.039)	(0.042)	(0.044)	(0.030)	(0.030)	(0.028)
Constant	0.337***	0.316***	0.522***	0.235***	0.276***	0.210***
	(0.067)	(0.071)	(0.075)	(0.052)	(0.052)	(0.051)
Observations	1,645	1,653	1,608	1,670	1,602	1,630
R-squared	0.074	0.070	0.066	0.058	0.051	0.047

Source: EVS and IPSOS Survey (2020).

Notes: This table describes the results of our baseline regression described in equation (1), using a dataset that includes directly the responses from the EVS and IPSOS surveys (unmatched dataset). See Table A3 for the description of the six statements. All columns control for the following characteristics: age, level of education, number of children, marital status, household income categories, and region fixed effects. We use the same control variables as the results presented in Table 3, except for number of hours worked, because the EVS dataset does not include this information. Significance levels: *** $p<0.01$, ** $p<0.05$. Robust standard errors are in parentheses.

Table A7. Impact of lockdown on beliefs in gender roles, Direct match

Statement:	(1) Kids	(2) Family	(3) Home	(4) Money	(5) Politics	(6) Business
Dependent variable:			"Agree" or "Strongly Agree" with Statement			
Lockdown	0.114***	0.042	0.013	0.113***	0.129***	0.110***
	(0.024)	(0.027)	(0.030)	(0.020)	(0.021)	(0.021)
Female	0.073***	0.113***	0.018	0.008	0.033**	-0.024
	(0.023)	(0.027)	(0.029)	(0.014)	(0.017)	(0.015)
Lockdown x Female	-0.067*	-0.087**	-0.037	-0.063**	-0.124***	-0.075***
	(0.035)	(0.039)	(0.041)	(0.026)	(0.027)	(0.026)
Constant	0.484***	0.493***	0.567***	0.205***	0.214***	0.070
	(0.077)	(0.085)	(0.091)	(0.059)	(0.060)	(0.050)
Observations	1,872	1,894	1,796	1,936	1,824	1,854
R-squared	0.110	0.083	0.067	0.062	0.071	0.050

Source: EVS and IPSOS Survey (2020).

Notes: This table shows the corresponding results of Table 3 using the matched sample directly, and using the variables that we used to conduct the Nearest-Neighbor Match as controls: age, level of education, marital status, life satisfaction, whether the respondent has children living in the household, and region fixed effects. See Table A3 for the description of the six statements. Significance levels: *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table A8. Impact of lockdown on beliefs in gender roles, ATE using different Nearest-Neighbor Matching models

	Mahalanobis distance						Euclidean distance					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Statement:	Kids	Family	Home	Money	Politics	Business	Kids	Family	Home	Money	Politics	Business
Dependent variable:	"Agree" or "Strongly Agree" with Statement											
Model 1	0.066***	-0.003	-0.010	0.064***	0.053***	0.060***	0.049**	0.018	-0.012	0.063***	0.064***	0.061***
	(0.022)	(0.023)	(0.025)	(0.016)	(0.016)	(0.015)	(0.022)	(0.022)	(0.024)	(0.016)	(0.016)	(0.015)
Model 2	0.068***	0.001	0.003	0.058***	0.059***	0.065***	0.046**	0.009	-0.019	0.064***	0.057***	0.058***
	(0.021)	(0.023)	(0.025)	(0.016)	(0.017)	(0.015)	(0.022)	(0.022)	(0.025)	(0.016)	(0.016)	(0.016)
Model 3	0.083***	0.021	0.000	0.068***	0.060***	0.059***	0.067***	0.012	-0.012	0.059***	0.059***	0.052***
	(0.022)	(0.024)	(0.025)	(0.016)	(0.016)	(0.015)	(0.023)	(0.023)	(0.025)	(0.017)	(0.017)	(0.016)
Model 4	0.085***	0.016	0.011	0.075***	0.058***	0.064***	0.067***	0.005	-0.009	0.065***	0.057***	0.053***
	(0.023)	(0.025)	(0.026)	(0.016)	(0.017)	(0.015)	(0.023)	(0.023)	(0.025)	(0.016)	(0.017)	(0.015)
Model 5	0.081***	0.017	0.041*	0.083***	0.071***	0.062***	0.068***	0.009	0.011	0.076***	0.060***	0.059***
	(0.022)	(0.024)	(0.025)	(0.017)	(0.017)	(0.016)	(0.022)	(0.023)	(0.025)	(0.016)	(0.016)	(0.016)
Model 6	0.083***	0.013	0.005	0.077***	0.059***	0.068***	0.045**	0.013	-0.009	0.053***	0.050***	0.053***
	(0.021)	(0.023)	(0.025)	(0.016)	(0.016)	(0.015)	(0.022)	(0.023)	(0.024)	(0.015)	(0.016)	(0.016)
Model 7	0.076***	0.003	-0.006	0.051***	0.052***	0.065***	0.056**	0.025	0.001	0.065***	0.063***	0.059***
	(0.022)	(0.024)	(0.025)	(0.017)	(0.016)	(0.016)	(0.022)	(0.023)	(0.024)	(0.016)	(0.016)	(0.015)
Model 8	0.076***	0.003	0.004	0.064***	0.054***	0.067***	0.045*	0.018	-0.004	0.069***	0.068***	0.065***
	(0.023)	(0.024)	(0.026)	(0.017)	(0.017)	(0.016)	(0.024)	(0.024)	(0.026)	(0.018)	(0.017)	(0.016)

Notes: This table shows ATE of Nearest-Neighbor Matching models where the matching variables differ by model. Model 1 with Mahalanobis distance is the one we use for our main matching exercise. Model 1 matches on age, marital status, life satisfaction, education, number of children, region, and exact matches on female and having a child 12 or under. Model 2: matches on age, marital status, life satisfaction, education, number of children, region, and exact matches on female. Model 3: matches on age, marital status, education, number of children, region, and exact matches on female. Model 4: matches on age, marital status, education, region, and exact matches on female. Model 5: matches on age, marital status, education, and exact matches on female. Model 6: matches on age, life satisfaction, education, number of children, region, and exact matches on female and being married. Model 7: matches on age, marital status, life satisfaction, education, number of children, region, and exact matches on female and having a child 12 or under. Model 8: matches on age, marital status, life satisfaction, education, number of children, income, and exact matches on female and having a child 12 or under. Significance levels: *** p<0.01, ** p<0.05, * p<0.10. Robust standard errors are in parentheses.

Table A9. Analysis of response bias, in person interview versus self-administered, EVS 2018

Statement:	(1) Kids	(2) Family	(3) Home	(4) Money	(5) Politics	(6) Business
Dependent variable:	"Agree" or "Strongly Agree" with Statement					
Panel A: Benchmark						
Online survey	-0.003	0.029**	0.044***	0.020**	0.045***	0.049***
	(0.013)	(0.014)	(0.014)	(0.009)	(0.009)	(0.010)
Female	-0.074***	0.024	-0.051***	-0.031***	-0.016	-0.045***
	(0.013)	(0.015)	(0.014)	(0.009)	(0.010)	(0.010)
Online survey × Female	-0.021	-0.036*	-0.041**	-0.019	-0.062***	-0.071***
	(0.017)	(0.019)	(0.018)	(0.012)	(0.013)	(0.013)
Constant	0.242***	0.339***	0.401***	0.177***	0.244***	0.272***
	(0.036)	(0.041)	(0.040)	(0.026)	(0.027)	(0.028)
Observations	7,919	7,895	7,803	7,951	7,887	7,888
R-squared	0.114	0.169	0.110	0.055	0.040	0.049
Panel B: Children under 12						
Online survey	-0.002	-0.001	0.058***	0.026**	0.059***	0.061***
	(0.017)	(0.019)	(0.019)	(0.012)	(0.013)	(0.013)
Female	-0.086***	-0.030	-0.049**	-0.033**	-0.019	-0.039***
	(0.019)	(0.021)	(0.021)	(0.013)	(0.014)	(0.015)
Online survey × Female	-0.024	0.003	-0.086***	-0.023	-0.072***	-0.088***
	(0.024)	(0.027)	(0.026)	(0.017)	(0.018)	(0.018)
Kids	-0.008	-0.016	-0.019	0.002	0.012	0.005
	(0.018)	(0.021)	(0.020)	(0.013)	(0.014)	(0.014)
Online survey × Kids	-0.004	0.058**	-0.033	-0.013	-0.029	-0.025
	(0.023)	(0.027)	(0.026)	(0.017)	(0.018)	(0.018)
Female × Kids	0.023	0.105***	-0.004	0.003	0.006	-0.011
	(0.026)	(0.030)	(0.029)	(0.018)	(0.019)	(0.020)
Online survey × Female × Kids	0.010	-0.071*	0.100***	0.010	0.022	0.036
	(0.034)	(0.038)	(0.037)	(0.024)	(0.025)	(0.026)
Constant	0.248***	0.371***	0.406***	0.175***	0.241***	0.267***
	(0.037)	(0.042)	(0.041)	(0.026)	(0.028)	(0.029)
Observations	7,919	7,895	7,803	7,951	7,887	7,888
R-squared	0.114	0.171	0.112	0.055	0.041	0.049

Source: EVS (2020).

Notes: Data include respondents' beliefs in gender norms in six countries where a mixed-method (online survey or in-person interview) was applied for data collection: Denmark, Finland, Germany, Iceland, Netherlands, and Switzerland. See Table A2 for the description of the six statements. All regressions include regional fixed effects, as well as controls for age, household income category, level of education, marital status, and whether the respondent has children living in the household. Full results are available on request. Significance levels: *** p<0.01, ** p<0.05, * p<0.10.